

AD-A048 989

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 11/6  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HIGH-STRENGTH STEELS --ETC(U)  
DEC 77 S F ZEMANEK, N S NAPPI

UNCLASSIFIED

DTNSRDC-77-0069

NL

1 OF 5  
AD  
A048989



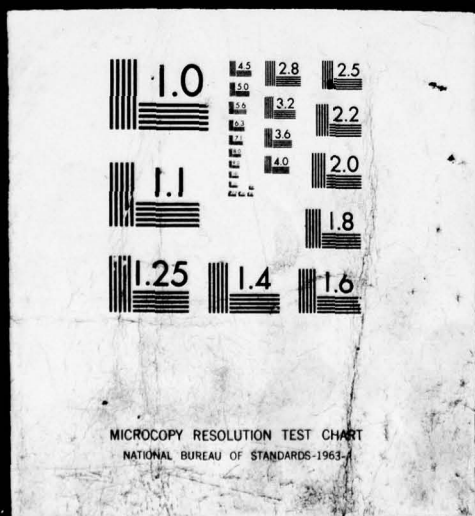


IFIED

1 OF 5

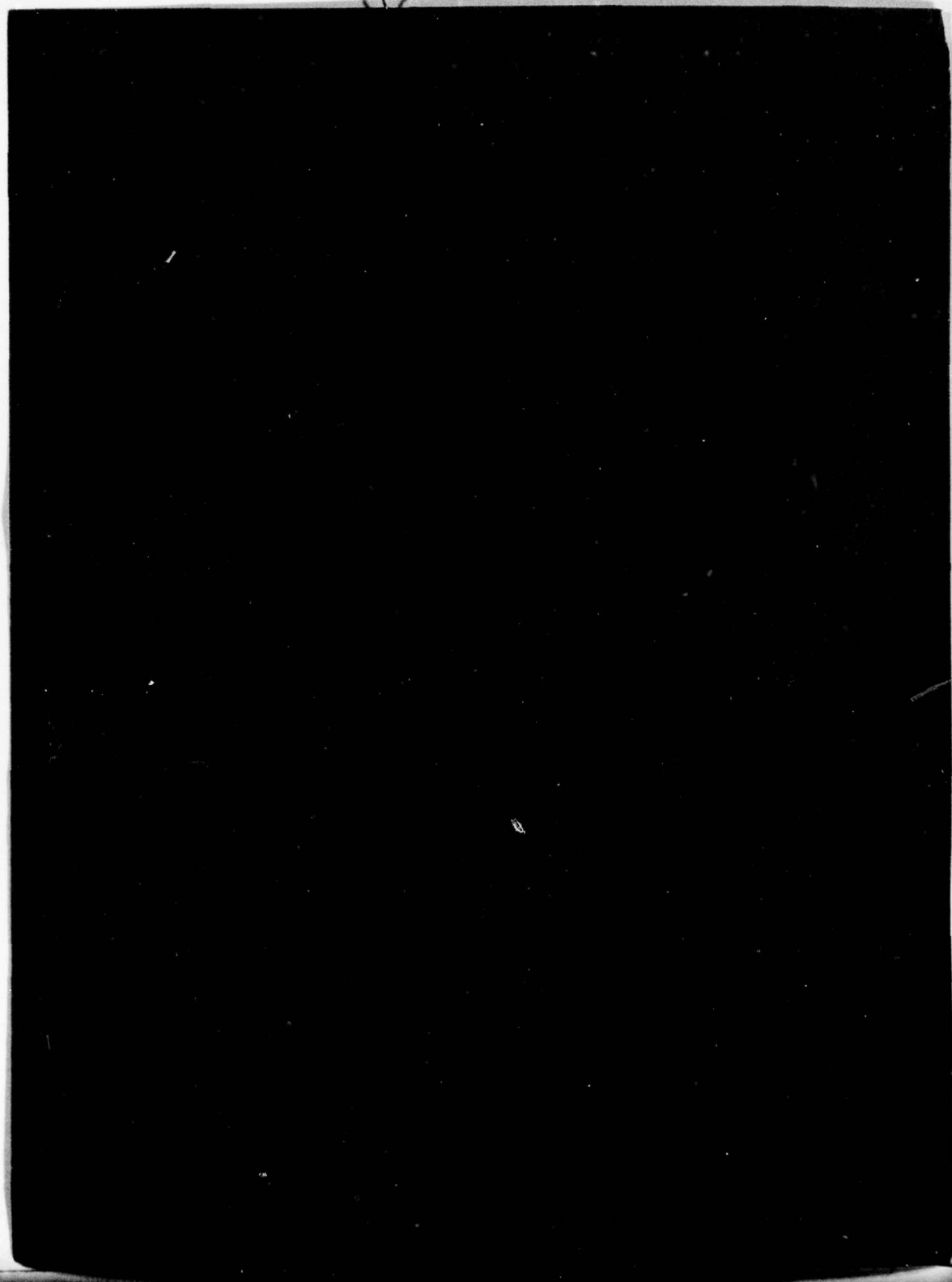
AD

A048989



ADAU48989

DINARD



UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DTNSRDC 77-0069 ✓	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) PROPERTIES OF COMBINED BEAM AND PLATE FOR HIGH-STRENGTH STEELS AND TITANIUM		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) Stephen F. Zemanek and Natale S. Nappi		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS David W. Taylor Naval Ship Research and Development Center Bethesda, Maryland 20084 ✓		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS (See reverse side)
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Sea Systems Command (03511) Washington, D.C. 20362		12. REPORT DATE December 1977
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 393
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  APPROVED FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) High-Strength Material Design Ship Structures Plate-Beam Properties		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Design information is given to provide ship structural designers with convenient tabulations of the properties of built-up T-beams for the follow- ing high-strength materials: HY-80, HY-100, HY-130, and Ti 6Al-4V extra low interstitial. The T-beams are arranged in order of increasing sectional area for each material. Criteria for proportioning the T-beams are included in this report. →  (Continued on reverse side)		

DD FORM 1473  
1 JAN 73EDITION OF 1 NOV 65 IS OBSOLETE  
S/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

(Block 10)

Element 62534N  
Task Area SF 43 422 593  
Task 20445  
Work Unit 1-1730-053

(Block 20 continued)

→ The unit system used in the tables is English. No attempt has been made to convert to metric units at this time since the majority of structural designs are still done in English units. ↗

ACCESSION for		White Section <input checked="" type="checkbox"/>
		Buff Section <input type="checkbox"/>
NTIS		
DDC		
UNANMOD/eng		
JUSTICE		
BY DISTRIBUTION/AVAILABILITY CODES		
Dist.	or SPECIAL	
A		

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)



## TABLE OF CONTENTS

	Page
ABSTRACT . . . . .	1
ADMINISTRATIVE INFORMATION . . . . .	1
INTRODUCTION . . . . .	1
DETERMINATION OF EFFECTIVE PLATING WIDTH . . . . .	2
DIMENSIONAL PROPORTIONING . . . . .	2
CALCULATION OF MINIMUM-FLANGE-WIDTH-TO-WEB- THICKNESS RATIO . . . . .	5
ADDITIONAL CONSTRAINTS FOR BEAM SELECTION . . . . .	6
INTERMEDIATE LATERAL SUPPORT . . . . .	7
EFFICIENT SECTION MODULUS DETERMINATION. . . . .	8
SYMBOL NOMENCLATURE AND DEFINITION . . . . .	9
ACKNOWLEDGMENTS . . . . .	10
REFERENCES . . . . .	12
APPENDIX A - PROPERTIES OF COMBINED BEAM AND PLATE FOR HY-80 STEEL . . . . .	13
APPENDIX B - PROPERTIES OF COMBINED BEAM AND PLATE FOR HY-100 STEEL . . . . .	107
APPENDIX C - PROPERTIES OF COMBINED BEAM AND PLATE FOR HY-130 STEEL . . . . .	201
APPENDIX D - PROPERTIES OF COMBINED BEAM AND PLATE FOR TI 6AL-4V EXTRA LOW INTERSTITIAL MATERIAL . . . . .	295

## LIST OF FIGURES

1 - Safe Beam Length versus Area of T-Beam . . . . .	11
2 - Efficiency of Section Modulus versus Selected T-Beam . . . . .	11
3 - Section Modulus versus Area of T-Beam . . . . .	11

## LIST OF TABLES

1 - Dimensional Limitations for T-Beams of High-Yield Material . . . . .	3
2 - Standard Thickness of Plates . . . . .	4



### ABSTRACT

Design information is given to provide ship structural designers with convenient tabulations of the properties of built-up T-beams for the following high-strength materials: HY-80, HY-100, HY-130, and Ti 6Al-4V extra low interstitial. The T-beams are arranged in order of increasing sectional area for each material. Criteria for proportioning the T-beams are included in this report.

The unit system used in the tables is English. No attempt has been made to convert to metric units at this time since the majority of structural designs are still done in English units.

### ADMINISTRATIVE INFORMATION

The work reported herein was authorized and funded by the Naval Sea Systems Command (03511) under Research Development Test and Evaluation Element 62534N, Task Area SF 43 422 593, Task 20445, Program Code 053, Work Unit title Advanced Ship Structures, Work Unit 1-1730-053-37.

### INTRODUCTION

In its quest for faster and lighter ships, the Navy is investigating the use of materials with a high strength-to-weight ratio. Materials of primary interest are HY-80, HY-100, HY-130, and Ti 6Al-4V extra low interstitial (ELI).

Design information contained in this report was developed primarily for use in the structural synthesis design program (SSDP).<sup>1,2</sup> This publication, as a separate report, provides ship structural designers with convenient tabulations for built-up T-beams of higher yield material acting in combination with a range of plate sizes. A similar document for aluminum built-up T-beams was published in 1974.<sup>3</sup>

---

<sup>1</sup>Nappi, N.S. and F.M. Lev, "Midship Section Design for Naval Ships," NSRDC Report 3815 (1972). A complete listing of references is given on page 12. 909 1936

<sup>2</sup>Walz, R.W. et al., "Manual for Use of Structural Synthesis Design Program," DTNSRDC Report 77-0032 (1977). NR

<sup>3</sup>Lev, F.M. and N.S. Nappi, "Properties of Combined Aluminum Beam and Plate," NSRDC Report 4336 (1974). 778 616

Dimensional limitations for T-beams made of high-strength steel and titanium were computed by the formulas contained in the U.S. Navy design data sheet.<sup>4</sup> By applying these dimensional limitations to the present mild steel beams used in the structural synthesis design program, it was found that approximately 50 percent of the beams in that catalog were unacceptable for use if made of HY-80, HY-100, HY-130, or Ti 6Al-4V ELI materials. Therefore, a definite need existed for developing T-beams with dimensions based on the properties of the higher yield materials. By using the built-up T-beams described in this report, more efficient structural designs can be produced for higher yield materials.

#### DETERMINATION OF EFFECTIVE PLATING WIDTH

When the plate is considered to be acting in combination with a T-beam, selection of an effective width of plating is based on the following formula<sup>4</sup>

$$b_{\text{eff}} = 2t\sqrt{E/\sigma_y}$$

where E is modulus of elasticity

$\sigma_y$  is tensile yield strength

t is thickness of plate in inches.

Table 1 gives the values used for effective width for the various materials considered. The standard thicknesses of high yield plate available up to 2 inches are given in Table 2. Section properties listed in Appendixes A through D apply only when stiffener spacing is equal to or greater than effective width.

#### DIMENSIONAL PROPORTIONING

Proportioning of the T-beams was accomplished by using equations given in References 1 and 4. Use of these equations insured that local

---

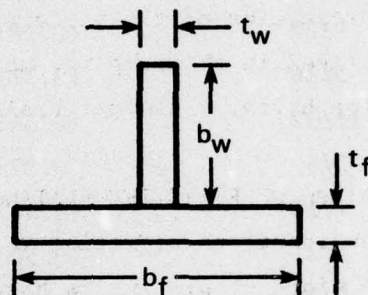
<sup>4</sup>"Strength of Structural Members," Design Data Book, Department of the Navy, Bureau of Ships Classification DDS 9110-4 (1956).



buckling of the flange and web would not occur at less than the yield strength of the material. The following limitations have been imposed on the dimensions of the built-up T-beams.

The maximum web-depth-to-web-thickness ratio ( $b_w/t_w$ ) is determined by

$$b_w/t_w = \sqrt{\frac{\pi^2 E k_c}{12(1-\nu^2)\sigma_y}}$$



where E is modulus of elasticity

$\nu$  is Poisson's ratio

$\sigma_y$  is yield strength

$k_c$  is coefficient dependent on plate aspect ratio, loading conditions, and boundary conditions.

TABLE 1 - DIMENSIONAL LIMITATIONS FOR T-BEAMS OF HIGH-YIELD MATERIAL

Material	Modulus of Elasticity psi	Yield Strength psi	Maximum Web Depth to Web Thickness $b_w/t_w$	Maximum Flange Width to Flange Thickness $b_f/t_f$	Effective Width of Plating	Density lb/in. <sup>3</sup>
HY-80	$29.0 \times 10^6$	$80 \times 10^3$	42	19	38t*	0.283
HY-100	$29.0 \times 10^6$	$100 \times 10^3$	37	17	34t	0.283
HY-130	$29.0 \times 10^6$	$130 \times 10^3$	33	15	30t	0.283
Ti 6Al-4V ELI	$16.5 \times 10^6$	$120 \times 10^3$	25	11	23t	0.160

\*Where t is the thickness of plate in inches.

TABLE 2 - STANDARD THICKNESS OF PLATES

Inches	
1/8	(0.1250)
5/32	(0.1563)
3/16	(0.1875)
7/32	(0.2188)
1/4	(0.2500)
9/32	(0.2813)
5/16	(0.3125)
11/32	(0.3438)
3/8	(0.3750)
7/16	(0.4375)
1/2	(0.5000)
9/16	(0.5625)
5/8	(0.6250)
11/16	(0.6875)
3/4	(0.7500)
7/8	(0.8750)
1	(1.0000)
1 1/8	(1.1250)
1 1/4	(1.2500)
1 3/8	(1.3750)
1 1/2	(1.5000)
1 3/4	(1.7500)
2	(2.0000)



The following assumptions were used to determine  $k_c$ .

1. The web aspect ratio is greater than 4, long and slender.
2. The limiting design-loading condition of uniform-edge compression is used.
3. The boundary conditions used are simply supported at the flange and fixed at the plate.

With these assumptions,  $k_c = 5.42$ .<sup>5</sup>

A typical calculation for determining maximum  $b_w/t_w$  follows:

$$\begin{aligned}\sigma_y &= 80,000 \text{ psi for HY-80} \\ E &= 29 \times 10^6 \text{ psi for HY-80} \\ \nu &= 0.3\end{aligned}$$

$$b_w/t_w = \sqrt{\frac{\pi^2 (29 \times 10^6) (5.42)}{12(1-0.3^2) 80,000}}$$

$$b_w/t_w = 42$$

The ratio of flange width to thickness is determined from

$$\begin{aligned}b_f/t_f &= \sqrt{E/\sigma_y} \\ &= \sqrt{\frac{29 \times 10^6}{80,000}}\end{aligned}$$

$$b_f/t_f = 19$$

Dimensional limitations used in this report are given in Table 1.

#### CALCULATION OF MINIMUM-FLANGE-WIDTH-TO-WEB-THICKNESS RATIO

To produce the maximum local buckling strength of the web of a T-beam, the flange must have sufficient bending stiffness so that the web will buckle in the mode of a plate, simply supported along both edges.<sup>5</sup> For this maximum web-buckling strength to be reached, the inertia of the flange

---

<sup>5</sup> Brockenbrough, R.L. and B.G. Johnston, "U.S. Steel Design Manual," (1974).

( $I_f$ ) must be determined by the larger of the following values:<sup>6</sup>

$$I_f = 1.85 b_f t_w^3 + 2.73 A_f t_w^2$$

$$I_f = 0.118 b_w t_w^3 (a/b - 0.41)^2 + 0.47 b_w t_w^3 + 0.43 A_f t_w^2 (a/b)^2$$

where  $a/b$  is aspect ratio of the T-beam. (This study used  $a/b = 4$ .)

It was noted during the calculations that one could determine a minimum ratio of flange width to web thickness  $b_f/t_w$  necessary to provide a simple support at the intersection of flange and web. The calculations showed that a minimum value of 10 for the  $b_f/t_w$  ratio was required for this support condition.

#### ADDITIONAL CONSTRAINTS FOR BEAM SELECTION

The built-up T-beams listed in Appendixes A through D offer the ship structural designer a wide range of beam dimensions for design considerations. These ranges are as follows:

	<u>Inches</u>	
	<u>From</u>	<u>To</u>
Range 1 - Web Depth	3	10
Flange Width	1	8
Web Thickness	0.1250	0.8750
Flange Thickness	0.1250	1.2500
Range 2 - Web Depth	12	18
Flange Width	4	12
Web Thickness	0.1250	1.2500
Flange Thickness	0.2188	1.5000
Range 3 - Web Depth	21	36
Flange Width	8	17
Web Thickness	0.3750	1.6250
Flange Thickness	0.4375	2.0000

Two additional constraints were used for final beam selection and have been presented in the following sections.

---

<sup>6</sup>Bleich, F., "Buckling Strength of Metal Structures," McGraw-Hill Book Company (Division of McGraw-Hill, Inc.) New York (1952).



### INTERMEDIATE LATERAL SUPPORT

When a T-beam attached to a plate is subjected to bending and/or direct compressive stresses, there is the possibility of lateral buckling, i.e., laying over of the outstanding flange. To prevent this lateral buckling problem, a criterion of maximum permissible ratio of beam length to flange width has been established to provide adequate stability of the outstanding flange.<sup>7</sup> This ratio of beam length (without intermediate lateral support) to flange width is given by the following equation

$$\frac{S}{b_f} = \frac{\frac{m\pi}{2\sqrt{3}} \sqrt{E/\sigma_{cr}}}{\sqrt{1 + \frac{1}{3} \frac{b_w t_w}{b_f t_f} - \frac{E t_f^2}{7.8 \sigma_{cr} b_w^2}}}$$

where  $S$  is safe length for stable T-beam

$\sigma_{cr}$  is critical buckling stress

$m$  is a constant, depending on degree of end constraint

$E$  is modulus of elasticity

Since it is desirable for a T-beam to retain its lateral stability until stressed to the yield point of the material,  $\sigma_{cr}$  was set equal to  $\sigma_y$ . The constant  $m$  was set equal to  $\sqrt{2}$  because the ends of the beam flanges are partially constrained in normal shipbuilding practices.<sup>7</sup>

When the depth of the web and width of the flange are held constant, and the thicknesses of the web and flange are varied, the variation of safe beam length versus the cross-sectional area of T-beam is shown in Figure 1. It can be seen that as the area (weight) increases, some T-beam sections have a shorter safe length than had the previous T-beam section.

<sup>7</sup>"Design Data for Tee Stiffeners," Navy Department, Bureau of Ships Report 017969 (1944).

Since an increase in weight with a reduction in safe length is a penalty to the designer, only T-beam sections along the dotted line in Figure 1 have been chosen.

#### EFFICIENT SECTION MODULUS DETERMINATION

Plate and beam combinations used in ship structures are subjected to both axial compressive and bending stresses. The equation for bending stress is

$$\sigma = \frac{M}{Z}$$

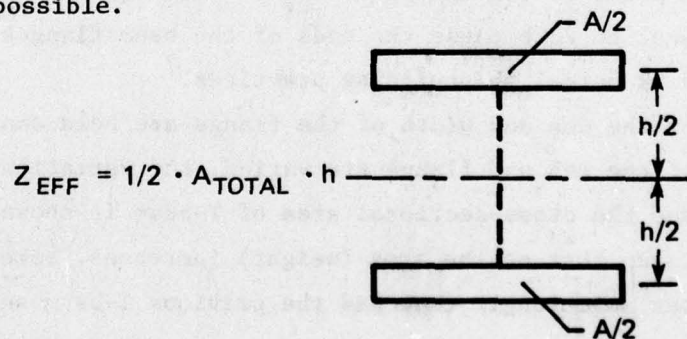
where  $\sigma$  is bending stress

$M$  is bending moment

$Z$  is section modulus

The section moduli of plate-beam combinations for aluminum, mild steel and high-tensile strength (HTS) steel have been tabulated, for use by designers, in References 3 and 8.

For the higher strength steels and titanium, used in this report, the theoretically most efficient section modulus ( $Z_{\text{EFF}}$ ) was determined, as shown below, using the information from strength of materials.<sup>9</sup> This section modulus is found when most of the material is as far from the neutral axis as possible.



<sup>8</sup>"Manual of Properties of Combined Beam and Plate, Part I, Tees and Angles," Coordinated by the Society of Naval Architects and Marine Engineers for the Maritime Administration, U.S. Department of Commerce, and the Bureau of Ships, Department of the Navy, NAVSHIPS 250-443-1, Part I (updated).

<sup>9</sup>Timoshenko, S. and D.H. Young, "Elements of Strength of Materials," McGraw-Hill Book Company (Division of McGraw-Hill, Inc.) New York (1968).



The minimum section modulus ( $Z_{MIN}$ ) for a plate-beam combination is then divided by the theoretically most efficient section modulus ( $Z_{EFF}$ ) to determine the percent of efficiency of the plate-beam combination. Figure 2 is an illustration of the variation of percent efficiency ( $Z_{MIN}/Z_{EFF}$ ) with selected T-beam for a typical thickness of plate. An arbitrary cutoff value can be selected to eliminate unnecessary (inefficient) plate-beam combinations. (This study used 50 percent.) The resulting plate-beam combinations were used in the remainder of the study.

Figure 3 shows minimum section modulus versus area of T-beam section. One can see that for an increase in area of the T-beam section, the increase in section modulus is small for some of the T-beam sections. Therefore, only those above the dotted line of Figure 3 were used for the final selection.

#### SYMBOL NOMENCLATURE AND DEFINITION

The section properties of combined beam and plate for high strength steels and titanium are given in Appendixes A through D. They are intended to be used in designing ship structures, when the plate is considered to act as one of the flanges of the attached member. Beams are arranged in order of increasing sectional area. The symbols used are defined as follows:

Nomenclature:	Definition
Beam area	Area of beam only in square inches
Beam depth	Depth of beam to the plate in inches
Flange thick	Thickness of beam flange in inches
Flange width	Width of beam flange in inches
Inertia	Moment of inertia of combined beam and plate in inch <sup>4</sup>
Nominal size	Beam designation for built-up beams--web depth times flange width times thickness of web/thickness of flange
R	Radius of gyration of combined beam and plate in inches
Shear area	Shear area of combined beam and plate (depth of beam plus plate thickness times thickness of web) in square inches
Web thick	Thickness of web in inches
Wt/ft	Weight per foot of beam only, in pounds per foot, based on unit weight of 0.283 pound per cubic inch (lb/in. <sup>3</sup> ) for steel and 0.160 lb/in. <sup>3</sup> for titanium

**Nomenclature:****Definition--continued**

YF	Distance from neutral axis to the beam flange in inches
YP	Distance from neutral axis to the plate in inches
ZFL	Section modulus to the flange in cubic inches
ZPL	Section modulus to the plate in cubic inches

**ACKNOWLEDGMENTS**

The authors would like to express their thanks to Messrs. Frank Lev and Ronald Walz for their assistance and helpful discussions during this study. Also, thanks to Messrs. Peter Roth, Daniel Gill, and Christopher McManus for their guidance with the computer programing.

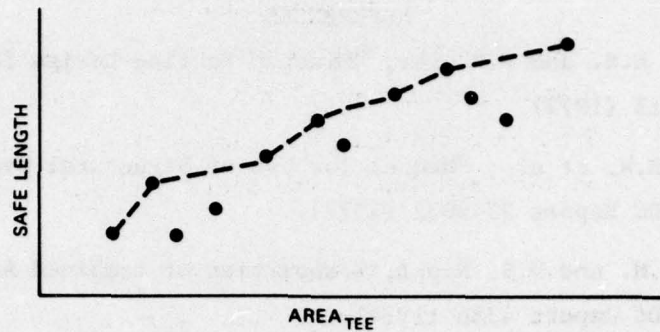


Figure 1 - Safe Beam Length versus Area of T-Beam

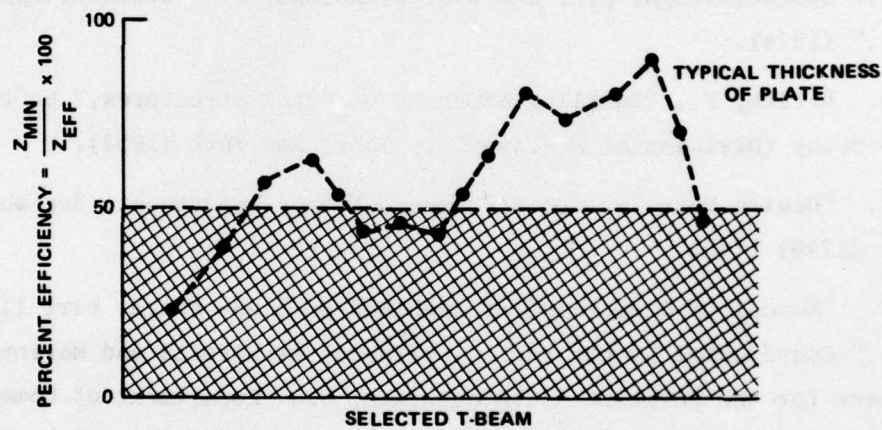


Figure 2 - Efficiency of Section Modulus versus Selected T-Beam

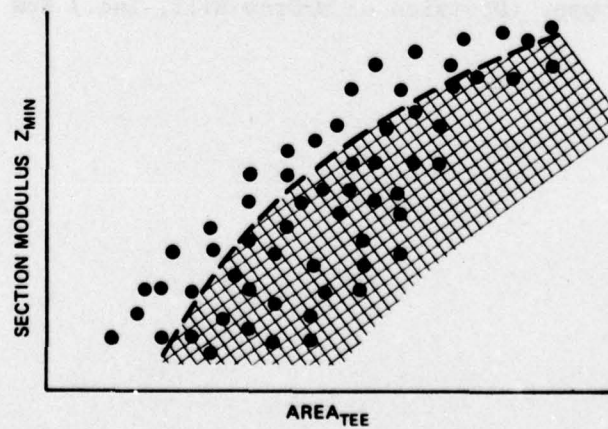


Figure 3 - Section Modulus versus Area of T-Beam



#### REFERENCES

1. Nappi, N.S. and F.M. Lev, "Midship Section Design for Naval Ships," NSRDC Report 3815 (1972).
2. Walz, R.W. et al., "Manual for Use of Structural Synthesis Design Program," DTNSRDC Report 77-0032 (1977).
3. Lev, F.M. and N.S. Nappi, "Properties of Combined Aluminum Beam and Plate," NSRDC Report 4336 (1974).
4. "Strength of Structural Members," Design Data Book, Department of the Navy, Bureau of Ships Classification DDS 9110-4 (1956).
5. Brockenbrough, R.L. and B.G. Johnston, "U.S. Steel Design Manual," (1974).
6. Bleich, F., "Buckling Strength of Metal Structures," McGraw-Hill Book Company (Division of McGraw-Hill, Inc.) New York (1952).
7. "Design Data for Tee Stiffeners," Navy Department, Bureau of Ships Report 017969 (1944).
8. "Manual of Properties of Combined Beam and Plate, Part I, Tees and Angles," Coordinated by the Society of Naval Architects and Marine Engineers for the Maritime Administration, U.S. Department of Commerce, and the Bureau of Ships, Department of the Navy, NAVSHIPS 250-443-1, Part I (updated).
9. Timoshenko, S. and D.H. Young, "Elements of Stength of Materials," McGraw-Hill Book Company (Division of McGraw-Hill, Inc.) New York (1968).



APPENDIX A  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HY-80 STEEL

-.125 IN. PLATE (AREA= .59 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		YF		AREA		DEPTH		THICK		WIDTH		FLANGE		SHEAR	
WT/FT		ZPL		ZFL		ZPL		YF		AREA		DEPTH		THICK		WIDTH		FLANGE		SHEAR	
3X 2X .125/.100T	2.55	1.9	1.4	1.4	2.7	1.4	1.4	1.9	1.9	.75	3.19	1.25	2.00	.188	.41	2.00	.188	.41	2.00	.188	.41
4X 2X .125/.100T	2.99	2.6	1.9	1.9	4.7	1.8	1.8	2.5	2.5	.88	4.19	1.25	2.00	.188	.54	2.00	.188	.54	2.00	.188	.54
3X 3X .125/.100T	3.20	2.0	1.9	1.9	3.2	1.4	1.6	1.7	1.7	.94	3.19	1.25	3.00	.188	.41	3.00	.188	.41	3.00	.188	.41
5X 2X .125/.100T	3.40	3.3	2.5	2.5	7.5	2.2	2.3	3.0	3.0	1.00	5.19	1.25	2.00	.188	.54	2.00	.188	.54	2.00	.188	.54
4X 3X .125/.100T	3.60	2.7	2.5	3.3	9.0	2.2	2.6	2.7	2.7	1.06	4.19	1.25	3.00	.188	.66	3.00	.188	.66	3.00	.188	.66
5X 3X .125/.100T	4.05	3.5	3.3	3.3	10.2	2.2	2.6	2.7	2.7	1.19	5.19	1.25	3.00	.188	.83	3.00	.188	.83	3.00	.188	.83
4X 2X .100/.313T	4.69	2.9	2.9	2.8	6.4	1.8	1.9	1.5	1.5	1.50	3.31	1.88	2.00	.313	.65	2.00	.313	.65	2.00	.313	.65
3X 3X .100/.313T	5.10	2.2	2.8	3.7	10.2	2.2	2.7	2.7	2.7	1.56	5.31	1.88	2.00	.313	1.02	2.00	.313	1.02	2.00	.313	1.02
5X 2X .100/.313T	5.30	3.8	3.7	4.7	15.2	2.5	3.2	3.2	3.2	1.75	6.31	1.88	2.00	.313	1.21	2.00	.313	1.21	2.00	.313	1.21
6X 2X .100/.313T	5.95	5.5	5.0	5.0	19.4	2.8	3.5	3.9	3.9	1.81	7.25	1.88	2.00	.313	1.39	2.00	.313	1.39	2.00	.313	1.39
7X 2X .100/.313T	6.15	5.5	5.0	5.0	19.4	2.8	3.5	3.9	3.9	1.81	7.25	1.88	2.00	.313	1.39	2.00	.313	1.39	2.00	.313	1.39
5X 3X .100/.313T	6.39	4.0	5.0	5.0	12.1	2.2	3.0	2.4	2.4	1.88	5.31	1.88	3.00	.250	1.02	3.00	.250	1.02	3.00	.250	1.02
5X 4X .100/.313T	6.60	4.0	5.3	5.3	12.3	2.2	3.1	2.3	2.3	1.94	5.25	1.88	3.00	.250	1.02	3.00	.250	1.02	3.00	.250	1.02
7X 3X .100/.313T	7.00	5.9	6.4	6.4	22.6	2.9	3.9	3.5	3.5	2.06	7.25	1.88	3.00	.250	1.39	3.00	.250	1.39	3.00	.250	1.39
4X 4X .100/.313T	7.24	5.0	6.6	6.6	18.1	2.6	3.6	2.8	2.8	2.13	6.25	1.88	4.00	.250	1.20	4.00	.250	1.20	4.00	.250	1.20
5X 4X .100/.313T	7.45	4.1	6.2	6.2	13.5	2.2	3.3	2.2	2.2	2.19	5.31	1.88	4.00	.250	1.02	4.00	.250	1.02	4.00	.250	1.02
7X 3X .100/.313T	7.65	6.1	7.4	7.4	24.8	3.0	4.1	3.4	3.4	2.25	7.31	1.88	3.00	.313	1.40	3.00	.313	1.40	3.00	.313	1.40
7X 4X .100/.313T	7.85	6.1	7.8	7.8	25.2	2.9	4.1	3.2	3.2	2.31	7.25	1.88	4.00	.250	1.39	4.00	.250	1.39	4.00	.250	1.39
6X 4X .100/.313T	8.09	5.2	7.7	7.7	19.9	2.6	3.8	2.6	2.6	2.38	6.31	1.88	4.00	.250	1.21	4.00	.250	1.21	4.00	.250	1.21
7X 4X .100/.313T	8.70	6.3	9.1	9.1	27.7	3.0	4.4	3.0	3.0	2.56	7.31	1.88	4.00	.313	1.40	4.00	.313	1.40	4.00	.313	1.40
6X 5X .100/.313T	9.15	5.3	9.2	9.2	21.6	2.6	4.1	2.4	2.4	2.69	6.31	1.88	5.00	.313	1.21	5.00	.313	1.21	5.00	.313	1.21
6X 3X .250/.438T	9.55	5.7	8.0	8.0	22.0	2.5	3.8	2.7	2.7	2.81	6.44	1.88	5.00	.313	1.21	5.00	.313	1.21	5.00	.313	1.21
7X 5X .100/.313T	9.79	6.4	10.9	10.9	30.1	2.9	4.7	2.8	2.8	2.88	7.31	1.88	5.00	.313	1.40	5.00	.313	1.40	5.00	.313	1.40
6X 4X .250/.375T	10.20	5.8	8.9	8.9	22.8	2.5	3.9	2.6	2.6	3.00	6.38	1.88	4.00	.375	1.63	4.00	.375	1.63	4.00	.375	1.63
8X 3X .250/.375T	10.40	7.0	9.6	9.6	30.7	2.9	4.4	3.2	3.2	3.06	7.44	1.88	3.00	.438	1.89	3.00	.438	1.89	3.00	.438	1.89
8X 3X .250/.375T	10.64	8.2	10.3	10.3	38.8	3.2	4.7	3.8	3.8	3.13	8.38	1.88	3.00	.438	2.13	3.00	.438	2.13	3.00	.438	2.13
9X 3X .250/.375T	10.85	9.3	10.8	10.8	47.1	3.5	5.1	4.4	4.4	3.19	9.31	1.88	3.00	.438	2.36	3.00	.438	2.36	3.00	.438	2.36
8X 4X .250/.375T	11.05	8.3	11.2	11.2	40.1	3.2	4.9	3.6	3.6	3.25	8.31	1.88	4.00	.438	2.11	4.00	.438	2.11	4.00	.438	2.11
8X 3X .250/.438T	11.25	8.4	11.4	11.4	41.3	3.3	4.9	3.6	3.6	3.31	8.44	1.88	3.00	.438	2.14	3.00	.438	2.14	3.00	.438	2.14
10X 3X .250/.375T	11.49	9.6	12.0	12.0	50.6	3.6	5.3	4.2	4.2	3.38	9.38	1.88	3.00	.375	2.61	3.00	.375	2.61	3.00	.375	2.61
10X 3X .250/.375T	11.70	10.9	12.4	12.4	60.2	3.9	5.6	4.9	4.9	3.44	10.31	1.88	3.00	.375	2.61	3.00	.375	2.61	3.00	.375	2.61
8X 4X .250/.375T	11.90	8.5	12.5	12.5	43.1	3.2	5.1	3.4	3.4	3.50	8.38	1.88	4.00	.375	2.13	4.00	.375	2.13	4.00	.375	2.13
9X 3X .250/.438T	12.10	9.9	13.1	13.1	53.9	3.6	5.5	4.7	4.7	3.56	9.44	1.88	3.00	.438	2.39	3.00	.438	2.39	3.00	.438	2.39
10X 3X .250/.375T	12.34	11.1	13.7	13.7	64.4	3.9	5.8	4.7	4.7	3.63	10.38	1.88	3.00	.375	2.63	3.00	.375	2.63	3.00	.375	2.63
10X 4X .250/.375T	12.75	11.3	14.7	14.7	66.6	3.9	5.9	4.5	4.5	3.75	10.31	1.88	3.00	.375	2.61	3.00	.375	2.61	3.00	.375	2.61
9X 5X .250/.375T	12.95	10.0	15.0	15.0	56.7	3.6	5.7	3.8	3.8	3.81	9.31	1.88	5.00	.375	2.36	5.00	.375	2.36	5.00	.375	2.36
8X 5X .250/.375T	13.19	8.8	14.8	14.8	46.8	3.2	5.3	3.2	3.2	3.88	8.38	1.88	5.00	.375	2.13	5.00	.375	2.13	5.00	.375	2.13
10X 4X .250/.375T	13.60	11.6	16.5	16.5	71.5	3.9	6.2	4.3	4.3	4.00	10.38	1.88	4.00	.375	2.63	4.00	.375	2.63	4.00	.375	2.63
10X 5X .250/.375T	13.80	11.6	17.0	17.0	72.1	3.9	6.2	4.2	4.2	4.06	10.31	1.88	5.00	.375	2.61	5.00	.375	2.61	5.00	.375	2.61
9X 5X .250/.375T	14.04	10.3	16.5	16.5	61.0	3.6	5.9	3.6	3.6	4.13	9.38	1.88	5.00	.375	2.34	5.00	.375	2.34	5.00	.375	2.34
8X 5X .250/.438T	14.25	9.0	16.5	16.5	49.7	3.2	5.5	3.0	3.0	4.13	8.44	1.88	4.00	.438	2.14	4.00	.438	2.14	4.00	.438	2.14
10X 4X .250/.438T	14.45	11.9	18.2	18.2	76.0	4.0	6.4	4.2	4.2	4.25	10.44	1.88	4.00	.438	2.64	4.00	.438	2.64	4.00	.438	2.64
10X 5X .250/.375T	14.89	12.0	19.2	19.2	77.4	3.9	6.5	4.0	4.0	4.38	10.38	1.88	5.00	.375	2.63	5.00	.375	2.63	5.00	.375	2.63
9X 5X .250/.438T	15.10	10.5	18.9	18.9	64.8	3.6	6.1	3.4	3.4	4.44	9.44	1.88	5.00	.438	2.39	5.00	.438	2.39	5.00	.438	2.39
9X 6X .250/.375T	15.30	10.5	19.4	19.4	64.9	3.6	6.2	3.3	3.3	4.50	9.38	1.88	6.00	.375	2.30	6.00	.375	2.30	6.00	.375	2.30

0.1250 - 1/8 in.

Preceding Page BLANK - NOT FILMED



125 IN. PLATE (AREA= .59 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YP	VF	***** BEAM *****		DIMENSIONS *****			SHEAR AREA
8X 6X	250/	WT/FT	ZPL	ZFL	INERTIA				AREA	DEPTH	THICK	WIDTH	THICK	
8X 6X	250/	15.74	9.1	19.0	52.8	3.2	5.8	2.8	4.53	8.44	.250	6.00	.438	2.14
10X 5X	250/	15.95	12.2	21.4	82.3	3.9	6.7	3.8	4.69	10.44	.250	6.00	.438	2.64
10X 6X	250/	16.15	12.2	22.0	82.6	3.9	6.7	3.8	4.75	10.38	.250	6.00	.375	2.63
9X 7X	250/	16.59	10.7	21.9	68.4	3.5	6.4	3.1	4.88	9.38	.250	7.00	.375	2.38
8X 7X	250/	17.20	9.3	21.4	55.4	3.1	6.0	2.6	5.06	8.44	.250	7.00	.438	2.14
10X 7X	250/	17.44	12.5	24.7	87.0	3.9	7.0	3.5	5.13	10.38	.250	7.00	.375	2.63
9X 7X	250/	18.05	11.0	24.5	72.4	3.5	6.6	3.0	5.31	9.44	.250	7.00	.438	2.39
10X 4X	313/	18.29	13.7	22.3	90.9	3.9	6.6	4.1	5.38	10.56	.313	4.00	.563	3.34
12X 4X	313/	18.29	17.0	23.0	122.4	4.5	7.2	5.3	5.38	12.41	.313	4.00	.486	3.92
8X 8X	250/	18.70	9.4	23.9	57.8	3.1	6.1	2.4	5.56	8.44	.250	8.00	.438	2.14
10X 7X	250/	18.30	12.7	27.6	92.2	3.9	7.2	3.3	5.56	10.44	.250	7.00	.438	2.64
12X 4X	313/	19.14	17.4	25.0	129.2	4.6	7.4	5.2	5.53	12.47	.313	4.00	.469	3.94
9X 8X	250/	19.55	11.1	27.3	75.4	3.4	6.8	2.8	5.75	9.44	.250	8.00	.438	2.39
12X 5X	313/	19.65	17.6	26.5	132.3	4.6	7.5	5.0	5.78	12.41	.313	5.00	.486	3.92
12X 4X	313/	19.99	17.8	27.0	135.7	4.6	7.6	5.0	5.88	12.53	.313	5.00	.531	3.96
10X 8X	250/	20.40	12.9	30.7	96.1	3.8	7.4	3.1	6.00	10.44	.250	8.00	.438	2.64
12X 5X	313/	20.71	18.0	29.0	139.8	4.6	7.8	4.8	6.09	12.47	.313	5.00	.469	3.94
12X 6X	313/	21.05	18.0	29.9	141.1	4.6	7.8	4.7	6.19	12.41	.313	6.00	.486	3.92
12X 5X	313/	21.79	18.4	31.5	146.9	4.6	8.0	4.7	6.41	12.53	.313	5.00	.531	3.96
12X 6X	313/	22.30	18.5	32.9	149.0	4.6	8.1	4.5	6.56	12.41	.313	6.00	.486	3.94
12X 7X	313/	22.41	18.4	33.4	148.9	4.6	8.1	4.5	6.53	12.41	.313	7.00	.486	3.92
12X 6X	313/	23.60	18.8	35.9	156.4	4.6	8.3	4.4	6.94	12.53	.313	6.00	.531	3.96
12X 7X	313/	23.90	18.9	36.9	157.2	4.5	8.3	4.3	7.03	12.47	.313	7.00	.469	3.94
14X 4X	375/	24.24	24.2	32.3	202.1	5.1	8.3	6.3	7.13	14.47	.375	4.00	.469	5.47
14X 4X	375/	25.09	24.8	34.6	211.7	5.2	8.5	6.1	7.38	14.53	.375	4.00	.531	5.50
12X 8X	313/	25.40	19.2	40.3	164.8	4.5	8.6	4.1	7.47	12.53	.313	7.00	.531	3.96
12X 8X	313/	25.50	19.2	40.8	164.3	4.5	8.6	4.0	7.50	12.47	.313	8.00	.469	3.94
14X 4X	375/	25.94	25.3	36.9	220.9	5.2	8.7	6.0	7.53	14.59	.375	4.00	.594	5.52
12X 5X	375/	26.45	21.1	37.4	172.2	4.5	8.2	4.6	7.78	12.66	.375	5.00	.656	4.79
14X 5X	375/	26.79	25.8	39.0	228.7	5.2	8.9	5.9	7.88	14.66	.375	4.00	.656	5.54
14X 5X	375/	26.89	25.7	39.8	228.8	5.2	8.9	5.8	7.81	14.53	.375	5.00	.531	5.50
12X 8X	313/	27.20	19.5	44.7	172.1	4.5	8.8	3.8	8.00	12.53	.313	8.00	.531	3.96
14X 6X	375/	28.70	26.4	45.0	243.9	5.2	9.2	5.4	8.44	14.53	.375	6.00	.531	5.50
14X 5X	375/	29.00	26.7	45.3	248.5	5.2	9.3	5.5	8.53	14.66	.375	5.00	.656	5.54
14X 7X	375/	29.88	26.5	46.0	245.3	5.2	9.3	5.3	8.53	14.47	.375	7.00	.469	5.47
12X 9X	313/	29.00	19.8	49.0	178.5	4.4	9.0	3.6	8.53	12.53	.313	9.00	.531	3.96
14X 6X	375/	29.95	27.0	48.3	254.7	5.2	9.4	5.3	8.81	14.59	.375	6.00	.594	5.52
14X 7X	375/	30.50	27.1	50.0	257.7	5.2	9.5	5.1	9.00	14.53	.375	7.00	.531	5.50
14X 8X	375/	30.60	27.0	50.5	256.8	5.2	9.5	5.1	9.00	14.47	.375	8.00	.469	5.47
12X 10X	313/	30.80	20.0	53.3	184.2	4.4	9.2	3.5	9.06	12.53	.313	10.00	.531	3.96
14X 6X	375/	31.25	27.4	51.5	264.8	5.2	9.6	5.1	9.19	14.66	.375	6.00	.656	5.54
14X 7X	375/	31.99	27.6	53.9	268.5	5.2	9.7	5.0	9.41	14.59	.375	7.00	.594	5.52
14X 8X	375/	32.30	27.6	55.1	269.2	5.2	9.8	4.9	9.58	14.53	.375	8.00	.531	5.50
16X 5X	438/	32.84	34.8	49.7	340.7	5.8	9.8	6.9	9.66	16.53	.438	5.00	.531	7.29
16X 5X	438/	33.90	35.5	52.9	355.1	5.8	10.0	6.7	9.97	1.59	.438	5.00	.594	7.32

0.1250 - 1/8 in.

125 IN. PLATE (AREA= .59 SQ. IN.)

NOMINAL SIZE	SECTION		MODULUS		INERTIA	R	YP	VF	AREA	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL	ZPL						DEPTH	THICK	WIDTH	THICK
14X 8X .375/.594T	34.00	28.1	59.6	280.9	5.1	10.0	4.7	10.00	14.59	.375	8.00	.594	5.52
14X 9X .375/.531T	34.10	28.0	60.1	280.9	5.1	10.0	4.7	10.03	14.53	.375	9.00	.531	5.50
16X 6X .438/.531T	34.65	35.8	55.6	362.8	5.8	10.1	6.5	10.19	16.53	.438	6.00	.531	7.29
16X 5X .438/.656T	34.95	36.2	56.0	368.9	5.8	10.2	6.6	10.28	16.66	.438	5.00	.656	7.35
12X10X .375/.594T	35.50	22.6	58.9	207.9	4.3	9.2	3.5	10.44	12.59	.375	10.00	.594	4.77
14X 8X .375/.656T	35.70	28.5	63.7	291.5	5.1	10.2	4.6	10.50	14.66	.375	8.00	.656	5.54
16X 6X .438/.594T	35.90	36.6	59.4	378.3	5.8	10.3	6.4	10.56	16.59	.438	6.00	.594	7.32
14X10X .375/.531T	35.90	28.4	65.1	289.8	5.1	10.2	4.5	10.56	14.53	.375	10.00	.531	5.50
16X 5X .438/.719T	36.01	36.8	59.2	382.2	5.8	10.4	6.5	10.59	16.72	.438	5.00	.719	7.30
14X 9X .375/.594T	36.01	28.5	65.1	291.8	5.1	10.2	4.5	10.59	14.59	.375	9.00	.594	5.52
16X 6X .438/.656T	37.20	37.3	63.1	393.2	5.8	10.6	6.2	10.94	16.66	.438	6.00	.656	7.35
18X 6X .438/.531T	37.60	43.3	65.0	485.1	6.5	11.2	7.5	11.06	18.53	.438	6.00	.531	8.17
18X 5X .438/.656T	37.94	43.7	65.6	492.8	6.5	11.3	7.5	11.16	18.66	.438	5.00	.656	8.23
14X10X .375/.594T	38.05	28.9	70.6	301.7	5.1	10.4	4.3	11.19	14.59	.375	10.00	.594	5.52
16X 6X .438/.719T	38.45	37.9	66.9	407.4	5.9	10.8	6.1	11.31	16.72	.438	6.00	.719	7.30
18X 6X .438/.594T	38.90	44.2	69.4	505.5	6.5	11.4	7.3	11.44	18.59	.438	6.00	.594	8.20
18X 5X .438/.719T	39.00	44.5	69.1	510.2	6.5	11.5	7.4	11.47	18.72	.438	5.00	.719	8.25
16X 8X .438/.594T	39.95	38.2	72.2	417.9	5.8	10.9	5.8	11.75	16.59	.438	8.00	.594	7.32
16X 9X .438/.531T	40.05	38.2	72.8	417.1	5.8	10.9	5.7	11.78	16.53	.438	9.00	.531	7.29
14X11X .375/.594T	40.05	29.2	76.3	310.7	5.0	10.6	4.1	11.78	14.59	.375	11.00	.594	5.52
18X 7X .438/.594T	40.90	45.3	76.6	533.1	6.5	11.8	7.0	12.03	18.59	.438	7.00	.594	8.20
18X 8X .438/.531T	41.24	45.4	78.1	535.5	6.5	11.8	6.9	12.03	18.53	.438	8.00	.531	8.17
18X 6X .438/.719T	41.45	45.8	77.8	543.6	6.5	11.9	7.0	12.19	18.72	.438	6.00	.719	8.25
16X10X .438/.531T	41.85	38.8	78.7	432.4	5.8	11.2	5.5	12.31	16.53	.438	10.00	.531	7.29
16X 9X .438/.594T	41.96	38.9	78.6	435.0	5.8	12.0	5.5	12.34	16.59	.438	9.00	.594	7.32
18X 7X .438/.656T	42.40	45.4	80.3	544.9	6.5	12.0	6.8	12.47	18.66	.438	7.00	.656	8.23
14X11X .375/.656T	42.40	29.6	81.8	321.6	5.0	10.9	3.9	12.47	14.66	.375	11.00	.656	5.54
18X 9X .438/.531T	43.04	46.2	84.6	557.7	6.5	12.1	6.6	12.66	18.53	.438	9.00	.531	8.17
16X10X .438/.594T	44.00	39.5	85.0	450.7	5.8	11.4	5.3	12.94	16.59	.438	10.00	.594	7.32
16X11X .438/.594T	44.60	40.0	91.2	464.9	5.7	11.6	5.1	13.53	16.59	.438	11.00	.594	8.23
16X10X .438/.656T	46.10	40.2	91.8	467.7	5.7	11.6	5.1	13.56	16.66	.438	10.00	.656	7.35
18X 9X .438/.656T	46.85	40.0	97.4	603.6	6.5	12.6	6.2	13.78	18.66	.438	9.00	.656	8.23
18X10X .438/.594T	46.95	47.9	98.3	602.5	6.5	12.6	6.1	13.81	18.59	.438	10.00	.594	8.20
16X10X .438/.719T	48.25	40.8	97.3	483.8	5.7	11.9	5.0	14.19	16.72	.438	10.00	.719	7.30
16X11X .438/.656T	48.35	40.7	98.0	482.2	5.7	11.9	4.9	14.22	16.66	.438	11.00	.656	7.35
18X10X .438/.656T	49.10	48.7	105.2	625.2	6.4	12.8	5.9	14.44	18.66	.438	10.00	.656	8.23
16X11X .438/.719T	50.69	41.3	104.5	498.2	5.7	12.1	4.8	14.91	16.72	.438	11.00	.719	7.30
18X11X .438/.656T	51.31	49.3	112.9	645.1	6.4	13.1	5.7	15.09	18.66	.438	11.00	.656	8.23
21X 8X .500/.625T	52.70	65.8	109.7	894.9	7.5	13.6	8.2	15.50	21.63	.500	8.00	.625	10.80
18X12X .438/.656T	53.55	49.9	120.6	663.2	6.4	13.3	5.5	15.75	21.63	.438	12.00	.656	8.23
21X 8X .500/.688T	54.40	67.0	116.3	927.4	7.5	13.8	8.0	16.00	21.69	.500	8.00	.688	10.91
21X 8X .500/.750T	56.10	68.1	122.8	958.4	7.5	14.1	7.8	16.50	21.75	.500	8.00	.750	10.94
21X10X .500/.625T	56.95	68.3	127.1	966.2	7.5	14.2	7.6	16.75	21.63	.500	10.00	.625	10.80
21X 9X .500/.750T	58.65	69.4	133.4	998.2	7.5	14.4	7.5	17.25	21.75	.500	9.00	.750	10.94

0.1250 - 1/8 in.



.125 IN. PLATE (AREA = .59 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	VP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	69.3	136.0	998.3	7.5	14.4	7.3	17.38	21.63	.500	11.00	.625	18.88
21X 8X .500/.875T	59.50	70.1	135.8	1017.0	7.5	14.5	7.5	17.50	21.68	.500	8.00	.875	11.00
21X10X .500/.750T	61.20	70.5	143.6	1034.5	7.5	14.7	7.2	18.00	21.75	.500	10.00	.750	10.94
21X11X .500/.688T	61.40	70.4	145.0	1034.2	7.4	14.7	7.1	18.06	21.69	.500	11.00	.688	10.91
21X13X .500/.688T	66.10	72.1	164.1	1093.3	7.4	15.2	6.7	19.44	21.69	.500	13.00	.688	10.91
21X12X .500/.750T	66.30	72.4	164.3	1099.3	7.4	15.2	6.7	19.50	21.75	.500	12.00	.750	10.94
21X11X .500/.875T	68.44	73.4	171.3	1131.0	7.4	15.4	6.6	20.13	21.88	.500	11.00	.875	11.00
24X 9X .625/.750T	73.95	101.6	169.2	1579.4	8.4	15.5	9.3	21.75	24.75	.625	9.00	.750	15.55
24X10X .625/.750T	76.50	103.4	181.2	1637.8	8.4	15.8	9.0	22.50	24.75	.625	10.00	.750	15.55
24X11X .625/.750T	79.05	105.1	193.0	1692.2	8.4	16.1	8.8	23.25	24.75	.625	11.00	.750	15.55
24X10X .625/.875T	80.75	106.5	199.4	1735.8	8.4	16.3	8.7	23.75	24.88	.625	10.00	.875	15.63
24X 9X .625/1.125T	85.44	109.9	218.0	1845.1	8.5	16.8	8.5	25.13	25.13	.625	9.00	1.125	15.78
24X13X .625/.875T	89.69	111.0	240.1	1897.8	8.4	17.1	7.9	26.38	24.88	.625	13.00	.875	15.63
24X14X .625/.875T	92.65	112.2	253.7	1945.0	8.4	17.3	7.7	27.25	24.88	.625	14.00	.875	15.63
24X11X .625/1.125T	93.09	113.3	252.3	1974.3	8.4	17.4	7.8	27.38	25.13	.625	11.00	1.125	15.78
24X12X .625/1.125T	96.90	114.7	269.2	2031.5	8.4	17.7	7.5	28.50	25.13	.625	12.00	1.125	15.78
27X 9X .688/1.125T	97.55	144.1	261.2	2623.9	9.5	18.2	10.0	28.69	28.13	.688	9.00	1.125	19.44
24X16X .625/.875T	99.60	114.3	280.4	2030.9	8.3	17.8	7.2	29.00	24.88	.625	16.00	.875	15.63
27X12X .688/.875T	98.80	143.9	271.0	2632.5	9.4	18.3	9.7	29.06	27.88	.688	12.00	.875	19.27
27X13X .688/.875T	101.80	145.8	286.4	2705.6	9.4	18.6	9.4	29.94	27.88	.688	13.00	.875	19.27
27X11X .688/1.125T	105.20	148.8	300.4	2811.9	9.4	18.9	9.4	30.34	28.13	.688	11.00	1.125	19.44
30X13X .750/.875T	115.19	186.8	337.4	3727.9	10.4	20.0	11.0	33.88	30.88	.750	13.00	.875	23.25
27X14X .688/1.125T	116.65	154.5	357.7	3068.1	9.3	19.7	8.5	34.31	28.13	.690	14.00	1.125	19.44
30X11X .750/1.125T	118.59	190.6	353.3	3889.7	10.4	20.3	11.0	34.88	31.13	.750	11.00	1.125	23.44
27X15X .688/1.125T	120.50	155.9	377.2	3117.3	9.3	20.0	8.3	35.44	28.13	.688	15.00	1.125	19.44
30X12X .750/1.125T	122.40	193.3	375.2	3987.6	10.4	20.6	10.6	36.00	31.13	.750	12.00	1.125	23.44
30X16X .750/.875T	124.10	193.3	388.7	4002.3	10.4	20.7	10.3	36.50	30.88	.750	16.00	.875	23.25
27X16X .688/1.125T	124.30	157.4	395.9	3191.8	9.3	20.2	8.0	36.56	28.13	.688	16.00	1.125	19.44
30X14X .750/1.125T	130.05	198.2	418.2	4202.6	10.4	21.2	10.0	38.25	31.13	.750	14.00	1.125	23.44
33X12X .875/1.125T	144.09	256.6	446.9	5503.5	11.4	21.8	12.5	42.38	34.13	.875	10.00	1.125	29.97
33X10X .875/1.375T	144.94	258.9	447.7	5680.3	11.4	21.9	12.6	42.63	34.38	.875	10.00	1.375	30.19
36X10X .875/1.125T	145.35	289.4	450.9	6587.7	12.3	22.7	14.6	42.75	37.13	.875	10.00	1.125	32.60
33X11X .875/1.375T	149.60	263.1	476.9	5880.9	11.5	22.2	12.3	44.00	34.38	.875	11.00	1.375	30.19
33X14X .875/1.125T	151.74	263.5	494.5	5887.8	11.4	22.3	11.9	44.63	34.13	.875	14.00	1.125	29.97
36X10X .875/1.500T	158.10	306.6	532.1	7318.0	12.5	23.9	13.8	46.50	37.50	.875	10.00	1.500	32.92
36X14X .875/1.375T	172.55	318.9	631.8	7988.9	12.4	24.9	12.6	50.75	37.38	.875	14.00	1.375	32.82
36X15X .875/1.500T	183.60	328.0	702.8	8413.6	12.4	25.7	12.0	54.00	37.50	.875	15.00	1.500	32.92

0.1250 - 1/8 in.

0.156 IN. PLATE (AREA= .93 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****				SHEAR AREA			
3X 2X	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE THICK	THICK	AREA
3X 2X	2.55	2.8	1.4	3.1	1.4	1.1	2.2	.75	3.19	.125	2.00	.180	.42
4X 2X	2.99	3.7	2.0	5.6	1.8	1.5	2.8	.88	4.19	.125	2.00	.180	.54
3X 3X	3.20	2.9	2.0	3.9	1.4	1.4	2.0	.94	3.19	.125	3.00	.180	.42
5X 2X	3.40	4.7	2.6	9.0	2.2	1.9	3.4	1.00	5.19	.125	2.00	.180	.67
4X 3X	3.60	3.0	2.7	6.0	1.9	1.8	2.6	1.06	4.19	.125	3.00	.180	.54
5X 3X	4.05	4.9	3.5	10.9	2.3	2.2	3.1	1.19	5.19	.125	3.00	.180	.67
4X 2X	4.69	4.1	3.0	7.8	1.8	1.9	2.6	1.38	4.31	.180	2.00	.313	.84
3X 3X	5.10	3.1	3.0	5.3	1.5	1.7	1.8	1.58	3.31	.180	3.00	.313	.65
5X 2X	5.30	5.2	4.0	12.3	2.2	2.4	3.1	1.56	5.31	.180	2.00	.313	1.83
6X 2X	5.95	6.4	5.0	18.1	2.6	2.8	3.6	1.75	6.31	.180	2.00	.313	1.22
7X 2X	6.15	7.4	5.3	23.0	2.9	3.1	4.3	1.81	7.25	.180	2.00	.250	1.39
5X 3X	6.39	5.5	5.3	14.8	2.3	2.7	2.8	1.88	5.31	.180	3.00	.313	1.03
5X 4X	6.60	5.5	5.6	15.0	2.3	2.7	2.7	1.94	5.25	.180	4.00	.250	1.82
6X 3X	7.00	7.8	6.8	27.0	3.0	3.5	4.8	2.06	7.25	.180	3.00	.250	1.39
6X 4X	7.24	6.8	7.0	22.0	2.7	3.2	3.2	2.13	6.25	.180	4.00	.250	1.20
7X 3X	7.45	5.6	6.6	16.7	2.3	3.0	2.5	2.13	5.31	.180	4.00	.313	1.03
7X 4X	7.65	8.1	7.9	29.8	3.1	3.7	3.8	2.25	7.31	.180	3.00	.313	1.40
8X 3X	7.85	8.1	8.3	30.4	3.1	3.8	3.7	2.31	7.25	.180	4.00	.250	1.39
7X 4X	8.09	7.0	8.2	24.3	2.7	3.5	3.0	2.38	6.31	.180	4.00	.313	1.22
7X 4X	8.70	8.3	9.7	33.5	3.1	4.0	3.5	2.56	7.31	.180	5.00	.313	1.65
6X 5X	9.15	7.1	9.7	26.6	2.7	3.7	2.7	2.69	6.31	.180	5.00	.313	1.40
6X 3X	9.55	7.5	8.6	26.4	2.7	3.5	3.1	2.81	6.44	.250	3.00	.438	1.63
7X 5X	9.79	8.5	11.5	36.7	3.1	4.3	3.2	2.88	7.31	.180	5.00	.313	1.40
6X 4X	10.20	7.6	9.5	27.6	2.6	3.6	2.9	3.08	6.38	.250	4.00	.375	1.63
7X 3X	10.40	9.0	10.3	36.5	3.0	4.0	3.6	3.06	7.44	.250	3.00	.438	1.90
8X 3X	10.64	10.4	11.0	45.7	3.4	4.4	4.1	3.13	8.38	.250	3.00	.375	2.13
9X 3X	10.85	11.7	11.5	54.9	3.7	4.7	4.8	3.19	9.31	.250	3.00	.313	2.37
8X 4X	11.05	10.5	11.9	47.3	3.4	4.5	4.0	3.25	8.31	.250	4.00	.313	2.12
8X 3X	11.25	10.7	12.1	48.8	3.4	4.6	4.0	3.31	8.44	.250	3.00	.438	2.15
9X 3X	11.49	12.1	12.7	59.1	3.7	4.9	4.6	3.38	9.38	.250	3.00	.375	2.38
10X 3X	11.70	13.5	13.2	69.8	4.0	5.2	5.3	3.44	10.31	.250	4.00	.313	2.63
10X 4X	11.90	10.8	13.3	51.0	3.4	4.7	3.8	3.50	8.38	.250	3.00	.375	2.13
9X 3X	12.10	12.4	14.0	63.1	3.7	5.1	4.5	3.56	9.44	.250	3.00	.438	2.40
10X 4X	12.34	13.6	14.6	74.8	4.1	5.4	5.1	3.63	10.38	.250	4.00	.375	2.63
11X 4X	12.58	14.0	15.7	77.4	4.1	5.5	4.9	3.75	10.31	.250	4.00	.313	2.62
9X 5X	12.95	12.6	16.0	66.6	3.7	5.3	4.2	3.81	9.31	.250	5.00	.313	2.37
8X 5X	13.19	11.1	15.8	55.7	3.4	5.0	3.5	3.88	8.38	.250	5.00	.375	2.13
10X 4X	13.60	14.4	17.5	83.3	4.1	5.8	4.8	4.00	10.38	.250	4.00	.375	2.63
11X 5X	13.80	14.4	18.1	84.0	4.1	5.8	4.6	4.06	10.31	.250	5.00	.313	2.62
9X 5X	14.04	12.9	18.0	71.8	3.8	5.6	4.0	4.13	9.38	.250	5.00	.375	2.38
8X 5X	14.25	11.4	17.5	59.3	3.4	5.2	3.4	4.13	8.44	.250	5.00	.438	2.15
10X 4X	14.45	14.8	19.3	88.7	4.1	6.0	4.6	4.25	10.44	.250	4.00	.438	2.63
11X 5X	14.89	14.8	20.4	90.5	4.1	6.1	4.4	4.38	10.38	.250	5.00	.375	2.63
9X 5X	15.10	13.2	20.1	76.5	3.8	5.8	3.8	4.44	9.44	.250	5.00	.438	2.40
10X 5X	15.30	13.2	20.6	76.7	3.8	5.8	3.7	4.50	9.38	.250	6.00	.375	2.30

0.1563 - 5/32 in.



.156 IN. PLATE (AREA = .93 SQ. IN.)

***** BEAM DIMENSIONS *****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														

0.1563 - 5/32 in.

120 IN. PLATE (ANLAE 0.5 SUAIN.)

NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YP	VF	***** BEAM DIMENSIONS *****			***** FLANGE *****			SHEAR AREA
	WT/FT	ZPL	ZFL					DEPTH	WEB THICK	WIDTH	THICK	AREA	THICK	
14X 8X .375/.594T	34.00	32.2	62.4	313.2	5.4	9.7	5.0	10.00	14.59	.375	8.00	.594	5.53	
14X 9X .375/.531T	34.10	32.1	62.9	313.1	5.3	9.7	5.0	10.03	14.53	.375	9.00	.531	5.51	
16X 6X .438/.531T	34.65	40.2	58.0	395.9	6.0	9.9	6.8	10.19	16.53	.438	6.00	.531	7.31	
16X 5X .438/.656T	34.95	40.6	58.4	402.6	6.0	9.9	6.9	10.28	16.66	.438	5.00	.656	7.37	
12X10X .375/.594T	35.50	26.3	61.9	235.2	4.5	8.9	3.8	10.44	12.59	.375	10.00	.594	4.78	
14X 8X .375/.656T	35.78	32.7	66.8	325.3	5.3	9.9	4.9	10.50	14.66	.375	8.00	.656	5.56	
16X 6X .438/.594T	35.90	41.0	61.9	413.0	6.0	10.1	6.7	10.56	16.59	.438	6.00	.594	7.33	
14X10X .375/.531T	35.90	32.5	68.2	323.5	5.3	9.9	4.7	10.56	14.53	.375	10.00	.531	5.51	
16X 5X .438/.719T	36.01	41.2	61.7	417.1	6.0	10.1	6.8	10.59	16.72	.438	5.00	.719	7.39	
14X 9X .375/.594T	36.41	32.7	68.2	325.7	5.3	10.0	4.8	10.59	14.59	.375	9.00	.594	5.53	
16X 6X .438/.656T	37.20	41.7	65.8	429.3	6.0	10.3	6.5	10.94	16.66	.438	6.00	.656	7.37	
18X 6X .438/.656T	37.60	48.2	67.7	525.7	6.6	10.9	7.8	11.06	18.53	.438	6.00	.531	8.10	
14X10X .375/.594T	37.94	48.6	68.2	534.0	6.6	11.0	7.8	11.16	18.66	.438	5.00	.656	8.24	
16X10X .438/.594T	38.05	33.1	73.9	337.8	5.3	10.2	4.6	11.13	14.59	.375	10.00	.594	5.53	
16X 6X .438/.719T	38.45	42.4	69.7	444.9	6.0	10.5	6.4	11.31	16.72	.438	6.00	.719	7.39	
18X 6X .438/.594T	38.90	49.1	72.2	547.9	6.7	11.2	7.6	11.44	18.59	.438	6.00	.594	8.21	
18X 5X .438/.719T	39.00	49.4	71.9	552.8	6.7	11.2	7.7	11.47	18.72	.438	5.00	.719	8.27	
16X 8X .438/.594T	39.95	42.8	75.1	456.7	6.0	10.7	6.1	11.75	16.59	.438	8.00	.594	7.33	
16X 9X .438/.531T	40.05	42.7	75.8	455.9	6.0	10.7	6.0	11.78	16.53	.438	9.00	.531	7.31	
14X11X .375/.594T	40.05	33.4	79.8	347.5	5.2	10.4	4.4	11.78	14.59	.375	11.00	.594	5.53	
18X 7X .438/.594T	40.90	50.3	79.6	578.0	6.7	11.5	7.3	12.03	18.59	.438	7.00	.594	8.21	
18X 8X .438/.531T	41.24	50.4	81.2	580.8	6.7	11.5	7.2	12.13	18.53	.438	8.00	.531	8.18	
18X 6X .438/.719T	41.45	58.8	80.9	589.3	6.7	11.6	7.3	12.19	18.72	.438	6.00	.719	8.27	
16X10X .438/.531T	41.85	43.3	81.9	472.9	6.0	10.9	5.8	12.31	16.53	.438	10.00	.531	7.31	
16X 9X .438/.594T	41.96	43.5	81.8	475.6	6.0	10.9	5.8	12.34	16.59	.438	9.00	.594	7.33	
18X 7X .438/.656T	42.40	50.4	83.5	591.7	6.6	11.7	7.1	12.47	18.66	.438	7.00	.656	8.24	
14X11X .375/.656T	42.40	33.9	85.6	359.9	5.2	10.6	4.2	12.47	14.66	.375	11.00	.656	5.56	
18X 9X .438/.531T	43.04	51.3	87.8	605.0	6.7	11.8	6.9	12.66	18.53	.438	9.00	.531	8.18	
16X10X .438/.594T	44.00	44.1	88.4	493.1	6.0	11.2	5.6	12.94	16.59	.438	10.00	.594	7.33	
18X 8X .438/.656T	44.64	52.3	92.9	629.1	6.7	12.0	6.8	13.13	18.66	.438	8.00	.656	8.24	
16X11X .438/.594T	46.08	44.7	94.8	508.8	5.9	11.4	5.4	13.53	16.59	.438	11.00	.594	7.33	
16X10X .438/.656T	46.10	44.9	94.7	511.9	5.9	11.4	5.4	13.56	16.66	.438	10.00	.656	7.37	
18X 9X .438/.656T	46.85	53.1	101.0	655.3	6.7	12.3	6.5	13.78	18.66	.438	9.00	.656	8.24	
18X10X .438/.594T	46.95	53.0	102.8	654.2	6.7	12.3	6.4	13.81	18.59	.438	10.00	.594	8.21	
16X10X .438/.719T	48.25	45.5	101.2	529.7	5.9	11.6	5.2	14.19	16.72	.438	10.00	.719	7.39	
16X11X .438/.656T	48.35	45.4	101.9	528.1	5.9	11.6	5.2	14.22	16.66	.438	11.00	.656	7.37	
18X10X .438/.656T	49.10	53.9	109.1	679.0	6.6	12.6	6.2	14.44	18.66	.438	10.00	.656	8.24	
16X11X .438/.719T	50.69	46.0	108.7	545.8	5.9	11.9	5.0	14.91	16.72	.438	11.00	.719	7.39	
18X11X .438/.656T	51.31	54.6	117.1	700.9	6.6	12.8	6.0	15.09	18.66	.438	11.00	.656	8.24	
21X 8X .500/.625T	52.70	71.6	113.3	955.3	7.6	13.4	8.4	15.50	21.63	.500	8.00	.625	10.89	
18X12X .438/.656T	53.55	55.2	125.1	721.0	6.6	13.1	5.8	15.75	18.66	.438	12.00	.656	8.24	
21X 8X .500/.688T	54.48	72.8	120.1	990.1	7.6	13.6	8.2	16.00	21.69	.500	8.00	.688	10.92	
21X 8X .500/.750T	56.10	74.0	126.7	1031.6	7.7	13.8	8.1	16.50	21.75	.500	8.00	.750	10.95	
21X10X .500/.625T	56.95	74.1	131.2	1023.2	7.6	13.9	7.9	16.75	21.63	.500	10.00	.625	10.89	
21X 9X .500/.750T	58.65	75.3	137.6	1066.1	7.7	14.2	7.7	17.25	21.75	.500	9.00	.750	10.95	

0.1563 - 5/32 in.



0.156 IN. PLATE (AREA = .93 SQ. IN.)

NOMINAL SIZE	SECTION MODULUS			R	Y <sub>P</sub>	V <sub>F</sub>	AREA	DEPTH	DIMENSIONS		SHEAR AREA	
	WT/FT	Z <sub>PL</sub>	Z <sub>FL</sub>						WEB THICK	FLANGE THICK		
21X11X .500/ .625T	59.09	75.2	140.2	7.6	14.2	7.6	17.38	21.63	.500	11.00	.625	10.89
21X 8X .500/ .875T	59.50	76.0	140.1	7.7	14.3	7.8	17.50	21.88	.500	8.00	.875	11.02
21X10X .500/ .750T	61.20	76.5	148.1	7.6	14.4	7.5	18.00	21.75	.500	10.00	.750	10.95
21X11X .500/ .688T	61.40	76.4	149.5	7.6	14.5	7.4	18.06	21.69	.500	11.00	.688	10.92
21X13X .500/ .688T	66.10	78.2	169.1	7.6	14.9	6.9	19.44	21.63	.500	13.00	.688	10.92
21X12X .500/ .750T	66.30	78.5	169.3	7.6	15.0	6.9	19.50	21.75	.500	12.00	.750	10.95
21X11X .500/ .875T	68.44	79.6	176.6	7.6	15.2	6.8	20.13	21.88	.500	11.00	.875	11.02
24X 9X .625/ .750T	73.95	108.1	173.5	8.6	15.3	9.6	21.75	24.75	.625	9.00	.750	15.57
24X10X .625/ .750T	76.50	110.0	185.7	8.6	15.6	9.3	22.50	24.75	.625	10.00	.750	15.57
24X11X .625/ .750T	79.05	111.7	197.7	8.6	15.9	9.0	23.25	24.75	.625	11.00	.750	15.57
24X10X .625/ .875T	80.75	113.2	204.3	8.6	16.1	8.9	23.75	24.88	.625	10.00	.875	15.65
24X 9X .625/1.125T	85.44	116.7	223.3	8.6	16.6	8.7	25.13	25.13	.625	9.00	1.125	15.80
24X13X .625/ .875T	89.69	117.8	245.8	8.5	16.9	8.1	26.38	24.88	.625	13.00	.875	15.65
24X14X .625/ .875T	92.65	119.1	259.7	8.5	17.2	7.9	27.25	24.88	.625	14.00	.875	15.65
24X11X .625/1.125T	93.09	120.2	258.3	8.6	17.3	8.0	27.38	25.13	.625	11.00	1.125	15.80
27X12X .688/1.125T	96.90	121.7	275.5	9.5	17.5	7.7	28.50	25.13	.625	12.00	1.125	15.80
27X 9X .688/1.125T	97.55	151.6	266.6	9.6	18.0	18.3	28.69	28.13	.688	9.00	1.125	19.46
27X16X .625/ .875T	98.60	121.3	286.9	9.6	17.6	7.4	29.00	24.88	.625	16.00	.875	15.65
27X12X .688/ .875T	98.80	151.4	276.6	9.6	18.1	9.9	29.06	27.88	.688	12.00	.875	19.29
27X13X .688/ .875T	101.80	153.3	292.2	9.6	18.4	9.6	29.94	27.88	.688	13.00	.875	19.29
27X11X .688/1.125T	105.20	156.5	306.5	9.6	18.7	9.6	30.94	28.13	.688	11.00	1.125	19.46
30X13X .750/ .875T	115.19	195.0	343.4	10.5	19.8	11.2	33.88	30.88	.750	13.00	.875	23.28
27X14X .688/1.125T	116.65	162.3	364.8	9.5	19.6	8.7	34.31	28.13	.688	14.00	1.125	19.46
30X11X .750/1.125T	118.59	198.9	359.5	10.6	20.1	11.1	34.88	31.13	.750	11.00	1.125	23.46
27X15X .688/1.125T	120.50	163.8	354.7	9.5	19.8	8.4	35.44	28.13	.688	15.00	1.125	19.46
30X12X .750/1.125T	122.40	201.7	381.7	10.6	20.5	10.8	36.00	31.13	.750	12.00	1.125	23.46
30X16X .750/ .875T	124.10	201.6	335.4	10.5	20.6	10.5	36.50	30.88	.750	16.00	.875	23.28
27X16X .688/1.125T	124.30	165.3	403.7	9.4	20.1	8.2	36.56	28.13	.688	16.00	1.125	19.46
30X14X .750/1.125T	130.05	206.7	425.4	10.5	21.1	10.2	38.25	31.13	.750	14.00	1.125	23.46
30X10X .875/1.375T	136.00	227.7	399.1	10.6	20.1	11.5	40.00	31.38	.875	10.00	1.375	27.59
33X12X .875/1.125T	144.09	265.5	453.4	11.5	21.6	12.7	42.38	34.13	.875	12.00	1.125	30.00
33X10X .875/1.375T	144.94	267.8	454.2	11.6	21.7	12.8	42.63	34.38	.875	10.00	1.375	30.22
36X10X .875/1.125T	145.35	298.8	457.2	12.4	22.5	14.7	42.75	37.13	.875	10.00	1.125	32.63
33X11X .875/1.375T	149.60	272.1	483.7	11.6	22.1	12.4	44.00	34.38	.875	11.00	1.375	30.22
33X14X .875/1.125T	151.74	272.5	501.5	11.5	22.2	12.1	44.63	34.13	.875	14.00	1.125	30.00
36X10X .875/1.500T	158.10	316.3	539.2	12.6	23.7	13.9	46.50	37.50	.875	10.00	1.500	32.95
36X14X .875/1.375T	172.55	328.9	640.0	12.6	24.8	12.7	50.75	37.38	.875	14.00	1.375	32.84
36X15X .875/1.500T	183.60	330.1	711.8	12.5	25.5	12.1	54.00	37.50	.875	15.00	1.500	32.95

0.1563 - 5/32 in.



•100 IN. PLATE (AREA= 1.34 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				BEAM DIMENSIONS				SHEAR AREA			
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	THICK	AREA
3X 2X .125/.100T	2.55	3.7	1.5	3.6	1.3	1.0	2.4	.75	3.19	.125	2.00	.100	.42
4X 2X .125/.100T	2.99	5.0	2.1	6.4	1.7	1.3	3.1	.88	4.19	.125	2.00	.100	.55
3X 3X .125/.100T	3.20	3.9	2.0	4.5	1.4	1.1	2.2	.94	3.19	.125	3.00	.100	.42
5X 2X .125/.100T	3.40	6.3	2.7	10.2	2.1	1.6	3.0	1.00	5.19	.125	2.00	.100	.67
4X 3X .125/.100T	3.60	5.2	2.7	7.9	1.8	1.5	2.9	1.06	4.19	.125	3.00	.100	.55
5X 3X .125/.100T	4.05	6.6	3.6	12.5	2.2	1.9	3.5	1.19	5.19	.125	3.00	.100	.67
4X 2X .100/.313T	4.69	5.4	3.2	9.0	1.6	1.7	2.8	1.38	4.31	.188	2.00	.313	.85
3X 3X .100/.313T	5.10	4.2	3.1	6.3	1.5	1.5	2.0	1.50	3.31	.188	3.00	.313	.66
5X 2X .100/.313T	5.30	6.9	4.1	14.2	2.2	2.1	3.4	1.56	5.31	.188	2.00	.313	1.03
6X 2X .100/.313T	5.95	8.4	5.2	20.9	2.6	2.5	4.0	1.75	6.31	.188	2.00	.313	1.22
7X 2X .100/.250T	6.15	9.6	5.6	26.3	2.9	2.7	4.7	1.81	7.25	.188	2.00	.250	1.40
5X 3X .100/.313T	6.39	7.3	5.6	17.3	2.3	2.4	3.1	1.88	5.31	.188	3.00	.313	1.03
5X 4X .100/.250T	6.60	7.2	5.9	17.6	2.3	2.4	3.0	1.94	5.25	.188	4.00	.250	1.02
7X 3X .100/.250T	7.00	10.1	7.1	31.2	3.0	3.1	4.4	2.06	7.25	.188	3.00	.250	1.40
6X 4X .100/.250T	7.24	8.9	7.3	25.7	2.7	2.9	3.5	2.13	6.25	.188	4.00	.250	1.21
5X 5X .100/.313T	7.45	7.5	6.9	19.7	2.4	2.6	2.8	2.19	5.31	.188	4.00	.313	1.03
7X 3X .100/.313T	7.65	10.5	8.3	34.6	3.1	3.3	4.2	2.25	7.31	.188	3.00	.313	1.41
7X 4X .100/.250T	7.85	10.5	8.7	35.4	3.1	3.4	4.1	2.31	7.25	.188	4.00	.250	1.40
6X 4X .100/.313T	8.09	9.1	8.5	28.6	2.8	3.1	3.4	2.38	6.31	.188	4.00	.313	1.22
7X 4X .100/.313T	8.70	10.8	10.1	39.3	3.2	3.6	3.9	2.56	7.31	.188	4.00	.313	1.41
6X 5X .100/.313T	9.15	9.3	10.2	31.6	2.8	3.4	3.1	2.69	6.31	.188	5.00	.313	1.22
5X 5X .100/.438T	9.55	9.6	9.0	30.9	2.7	3.2	3.4	2.81	6.44	.250	3.00	.313	1.66
7X 5X .100/.313T	9.79	11.1	12.1	43.4	3.2	3.9	3.6	2.88	7.31	.250	5.00	.313	1.41
6X 4X .250/.375T	10.20	9.7	10.8	32.4	2.7	3.3	3.2	3.00	6.38	.250	4.00	.375	1.64
7X 3X .250/.438T	10.40	11.5	10.8	42.5	3.1	3.7	3.9	3.06	7.44	.250	3.00	.438	1.91
8X 3X .250/.375T	10.64	13.1	11.6	52.7	3.4	4.0	4.5	3.13	8.38	.250	3.00	.375	2.14
9X 3X .250/.313T	10.85	14.7	12.1	63.0	3.7	4.3	5.2	3.19	9.31	.250	3.00	.313	2.37
8X 4X .250/.313T	11.05	13.2	12.5	54.7	3.5	4.1	4.4	3.25	8.31	.250	4.00	.313	2.12
8X 3X .250/.438T	11.25	13.4	12.7	56.4	3.5	4.2	4.4	3.31	8.44	.250	3.00	.438	2.16
9X 3X .250/.375T	11.49	15.1	13.4	68.0	3.8	4.5	5.1	3.38	9.38	.250	3.00	.375	2.39
10X 3X .250/.313T	11.70	16.7	13.9	79.7	4.1	4.8	5.7	3.44	10.31	.250	3.00	.313	2.62
8X 4X .250/.375T	11.90	13.6	14.0	59.2	3.5	4.4	4.2	3.50	8.38	.250	4.00	.375	2.14
9X 3X .250/.438T	12.10	15.5	14.7	72.7	3.9	4.7	4.9	3.56	9.44	.250	3.00	.438	2.41
10X 3X .250/.375T	12.34	17.1	15.4	85.6	4.2	5.0	5.6	3.63	10.38	.250	3.00	.375	2.64
10X 4X .250/.313T	12.75	17.3	16.5	88.7	4.2	5.1	5.4	3.75	10.31	.250	4.00	.313	2.62
9X 5X .250/.313T	12.95	15.7	16.8	77.0	3.9	4.9	4.6	3.81	9.31	.250	5.00	.313	2.37
8X 5X .250/.375T	13.13	14.0	16.6	65.0	3.5	4.6	3.9	3.88	8.38	.250	5.00	.375	2.14
10X 4X .250/.375T	13.60	17.8	18.4	95.8	4.2	5.4	5.2	4.00	10.38	.250	4.00	.375	2.64
10X 5X .250/.313T	13.80	17.9	19.0	96.7	4.2	5.4	5.1	4.06	10.31	.250	5.00	.313	2.62
9X 5X .250/.375T	14.04	16.1	19.0	83.3	3.9	5.2	4.4	4.13	9.38	.250	5.00	.375	2.39
8X 5X .250/.438T	14.25	14.3	18.5	69.4	3.5	4.9	3.8	4.19	8.44	.250	5.00	.438	2.16
10X 4X .250/.438T	14.45	18.2	20.4	102.2	4.3	5.6	5.0	4.25	10.44	.250	4.00	.438	2.66
10X 5X .250/.375T	14.69	18.3	21.5	104.5	4.3	5.7	4.9	4.38	10.38	.250	5.00	.375	2.66
9X 5X .250/.438T	15.10	16.5	21.2	89.1	3.9	5.4	4.2	4.44	9.44	.250	5.00	.438	2.41
9X 6X .250/.375T	15.30	16.4	21.7	89.4	3.9	5.4	4.1	4.50	9.38	.250	6.00	.375	2.39

0.1875 - 3/16 in.

.186 IN. PLATE (AREA= 1.34 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		DIMENSIONS		BEAM		FLANGE		SHEAR		
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
8X 6X .250/ .438T	14.5	21.3	74.5	3.5	5.1	3.5	4.63	8.44	.250	6.00	.438	2.16
10X 5X .250/ .438T	15.35	18.7	111.6	4.3	6.0	4.7	4.69	10.44	.250	5.00	.438	2.66
10X 6X .250/ .375T	16.15	18.7	112.2	4.3	6.0	4.6	4.75	10.38	.250	6.00	.375	2.64
16X 5X .250/ .375T	16.59	16.7	94.9	3.9	5.7	3.9	4.08	9.38	.250	7.00	.375	2.39
17X 20 14.7	14.7	24.1	78.9	3.5	5.3	3.3	5.06	8.44	.250	7.00	.438	2.16
10X 7X .250/ .375T	17.44	19.1	119.0	4.3	6.2	4.3	5.13	10.38	.250	7.00	.375	2.64
9X 7X .250/ .438T	18.05	17.0	101.2	3.9	5.9	3.7	5.31	9.44	.250	7.00	.438	2.41
10X 4X .313/ .563T	18.29	20.1	119.7	4.2	5.9	4.8	5.38	10.56	.313	4.00	.563	3.36
12X 4X .313/ .406T	18.29	24.2	156.7	4.8	6.5	6.1	5.38	12.41	.313	4.00	.406	3.94
8X 8X .250/ .438T	18.70	14.9	82.7	3.5	5.5	3.5	5.50	8.44	.250	8.00	.438	2.16
10X 7X .250/ .438T	18.90	19.5	126.7	4.3	6.5	4.1	5.56	10.44	.250	7.00	.438	2.66
12X 4X .313/ .469T	19.14	24.7	165.7	4.9	6.7	6.0	5.63	12.47	.313	4.00	.469	3.96
9X 8X .250/ .438T	19.55	17.3	106.1	3.9	6.2	3.5	5.75	9.44	.250	8.00	.469	2.41
12X 5X .313/ .406T	19.55	24.9	170.0	4.9	6.8	5.8	5.78	12.41	.313	5.00	.406	3.94
12X 4X .313/ .531T	19.99	25.3	174.5	4.9	6.9	5.8	5.88	12.53	.313	4.00	.531	3.98
10X 8X .250/ .438T	20.40	19.7	132.9	4.3	6.7	3.9	6.00	10.44	.250	8.00	.438	2.66
12X 5X .313/ .469T	20.71	25.5	180.1	4.9	7.1	5.6	6.09	12.47	.313	5.00	.469	3.96
12X 6X .313/ .406T	21.05	25.6	181.9	4.9	7.1	5.5	6.19	12.41	.313	6.00	.406	3.94
12X 5X .313/ .531T	21.79	26.0	189.7	4.9	7.3	5.4	6.41	12.53	.313	5.00	.531	3.98
12X 6X .313/ .469T	22.30	26.1	192.7	4.9	7.4	5.3	6.56	12.47	.313	6.00	.469	3.96
12X 7X .313/ .406T	22.41	26.1	192.8	4.9	7.4	5.2	6.59	12.41	.313	7.00	.406	3.94
12X 6X .313/ .531T	23.50	26.6	202.9	5.0	7.6	5.1	6.94	12.53	.313	6.00	.531	3.98
12X 7X .313/ .469T	23.90	26.6	204.1	4.9	7.7	5.0	7.03	12.47	.313	7.00	.469	3.96
14X 4X .375/ .469T	24.24	32.5	249.1	5.4	7.7	7.0	7.13	14.47	.375	4.00	.469	5.50
14X 4X .375/ .531T	25.09	33.2	261.1	5.5	7.9	6.8	7.38	14.53	.375	4.00	.531	5.52
12X 7X .313/ .531T	25.40	27.1	214.6	4.9	7.9	4.8	7.47	12.53	.313	7.00	.531	3.98
12X 8X .313/ .469T	25.50	27.1	214.2	4.9	7.9	4.7	7.50	12.47	.313	8.00	.469	3.96
14X 4X .375/ .594T	25.94	33.8	272.6	5.5	8.1	6.7	7.63	14.59	.375	4.00	.594	5.54
12X 5X .375/ .656T	26.45	28.7	217.7	4.9	7.6	5.3	7.78	12.66	.375	5.00	.656	4.82
14X 4X .375/ .656T	26.79	34.4	283.6	5.5	8.2	6.6	7.88	14.66	.375	4.00	.656	5.57
14X 5X .375/ .531T	26.89	34.3	317.8	5.5	8.2	6.5	7.91	14.53	.375	5.00	.531	5.52
12X 8X .313/ .531T	27.20	27.5	225.0	4.9	8.2	4.5	8.00	12.53	.313	8.00	.531	3.98
14X 6X .375/ .531T	28.70	35.2	302.3	5.6	8.6	6.1	8.44	14.53	.375	6.00	.531	5.52
14X 5X .375/ .656T	29.00	35.5	307.8	5.6	8.7	6.2	8.53	14.66	.375	5.00	.656	5.57
14X 7X .375/ .469T	29.00	35.2	304.1	5.6	8.6	6.0	8.53	14.47	.375	7.00	.469	5.58
12X 9X .313/ .531T	29.88	27.9	234.1	4.9	8.4	4.3	8.53	12.53	.313	9.00	.531	3.98
14X 6X .375/ .594T	29.95	35.8	315.9	5.6	8.8	6.0	8.81	14.59	.375	6.00	.594	5.54
14X 7X .375/ .531T	30.58	35.9	319.5	5.6	8.9	5.8	8.97	14.53	.375	7.00	.531	5.52
14X 8X .375/ .469T	30.68	35.9	319.1	5.6	8.9	5.8	9.00	14.47	.375	8.00	.469	5.50
12X 10X .313/ .531T	30.80	28.2	242.4	4.8	8.6	4.1	9.06	12.53	.313	10.00	.531	3.98
14X 6X .375/ .656T	31.25	36.4	328.9	5.6	9.1	5.8	9.19	14.66	.375	6.00	.656	5.57
14X 7X .375/ .594T	31.99	36.6	333.8	5.6	9.1	5.7	9.41	14.59	.375	7.00	.594	5.54
14X 8X .375/ .531T	32.30	36.6	335.1	5.6	9.2	5.6	9.50	14.53	.375	8.00	.531	5.52
16X 5X .438/ .531T	32.84	44.3	407.1	6.1	9.2	7.5	9.67	16.53	.438	5.00	.531	7.32
16X 5X .438/ .594T	33.90	45.1	424.4	6.1	9.4	7.4	9.96	16.59	.438	5.00	.594	7.32



100 IN. PLATE (AREA = 1.34 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS		FLANGE		SHEAR				
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WIDTH	THICK	AREA	
14X 8X .375/.594T	34.00	37.2	65.3	350.2	5.6	9.4	5.4	10.00	14.59	.375	8.00	.594	5.54
14X 9X .375/.531T	34.10	37.1	65.8	349.3	5.5	9.4	5.3	10.03	14.53	.375	9.00	.531	5.52
16X 6X .438/.531T	34.65	45.5	60.4	433.9	6.1	9.5	7.2	10.19	16.53	.438	6.00	.531	7.32
16X 5X .438/.656T	34.95	45.9	61.0	441.1	6.2	9.6	7.2	10.28	16.66	.438	5.00	.656	7.30
12X10X .375/.594T	35.50	30.7	64.9	266.5	4.8	8.7	4.1	10.44	12.59	.375	18.00	.594	4.79
14X 8X .375/.656T	35.70	37.8	69.8	364.0	5.5	9.6	5.2	10.50	14.66	.375	8.00	.656	5.57
16X 6X .438/.594T	35.90	46.4	64.6	452.7	6.2	9.8	7.0	10.56	16.59	.438	6.00	.594	7.35
14X10X .375/.531T	35.90	37.6	71.2	362.2	5.5	9.6	5.1	10.56	14.53	.375	10.00	.531	5.52
16X 5X .438/.719T	36.01	46.6	64.4	457.2	6.2	9.8	7.1	10.59	16.72	.438	5.00	.719	7.41
14X 9X .375/.594T	36.01	37.7	71.3	364.6	5.5	9.7	5.1	10.59	14.59	.375	9.00	.594	5.54
16X 6X .438/.656T	37.20	47.2	68.6	470.8	6.2	10.0	6.9	10.94	16.66	.438	6.00	.656	7.30
18X 6X .438/.531T	37.60	54.1	70.4	572.5	6.8	10.6	8.1	11.06	18.53	.438	6.00	.531	8.20
18X 5X .438/.656T	37.94	54.5	71.0	581.4	6.8	10.7	8.2	11.16	18.66	.438	5.00	.656	8.26
14X10X .375/.594T	38.05	38.2	77.3	377.8	5.5	9.9	4.9	11.19	14.59	.375	10.00	.594	5.54
16X 6X .438/.719T	38.45	47.9	72.6	488.1	6.2	10.2	6.7	11.31	16.72	.438	6.00	.719	7.41
18X 6X .438/.594T	38.90	55.1	75.1	596.8	6.8	10.8	7.9	11.44	18.59	.438	6.00	.594	8.22
18X 5X .438/.719T	39.00	55.4	74.8	602.0	6.9	10.9	8.0	11.47	18.72	.438	5.00	.719	8.28
16X 8X .438/.594T	39.95	48.4	78.2	501.4	6.2	10.4	6.4	11.75	16.59	.438	8.00	.594	7.35
16X 9X .438/.531T	40.05	48.3	78.9	508.6	6.2	10.4	6.3	11.78	16.53	.438	9.00	.531	7.32
14X11X .375/.594T	40.05	38.6	83.4	389.9	5.5	10.1	4.7	11.78	14.59	.375	11.00	.594	5.54
18X 7X .438/.594T	40.90	56.4	92.8	629.9	6.9	11.2	7.6	12.03	18.59	.438	7.00	.594	8.22
18X 8X .438/.531T	41.24	56.5	84.4	633.1	6.9	11.2	7.5	12.13	18.53	.438	8.00	.531	8.20
18X 6X .438/.719T	41.45	57.0	84.1	642.1	6.9	11.3	7.6	12.19	18.72	.438	6.00	.719	8.28
16X10X .438/.531T	41.85	49.0	85.2	519.8	6.2	10.6	6.1	12.31	16.53	.438	10.00	.531	7.32
16X 9X .438/.594T	41.96	49.1	85.1	522.7	6.2	10.6	6.1	12.34	16.59	.438	9.00	.594	7.35
18X 7X .438/.656T	42.40	56.6	86.9	645.9	6.8	11.4	7.4	12.47	18.66	.438	7.00	.656	8.26
14X11X .375/.656T	42.40	39.1	89.5	404.2	5.4	10.3	4.5	12.47	14.66	.375	11.00	.656	5.57
18X 9X .438/.531T	43.04	57.5	91.2	659.9	6.9	11.5	7.2	12.66	18.53	.438	9.00	.531	8.20
16X10X .438/.594T	44.00	49.8	92.0	542.3	6.2	10.9	5.9	12.34	16.59	.438	10.00	.594	7.35
18X 8X .438/.656T	44.64	58.5	96.5	686.3	6.9	11.7	7.1	13.13	18.66	.438	8.00	.656	8.26
16X11X .438/.594T	46.00	50.4	98.6	559.9	6.1	11.1	5.7	13.53	16.59	.438	11.00	.594	7.35
16X10X .438/.656T	46.10	50.6	98.5	563.3	6.1	11.1	5.7	13.56	16.66	.438	10.00	.656	7.38
18X 9X .438/.656T	46.85	59.5	104.9	715.3	6.9	12.0	6.8	13.78	18.66	.438	9.00	.656	8.26
16X10X .438/.719T	46.95	59.4	105.9	714.2	6.9	12.0	6.7	13.81	18.59	.438	10.00	.719	8.22
18X10X .438/.719T	48.25	51.3	105.3	583.2	6.1	11.4	5.5	14.19	16.72	.438	10.00	.719	7.41
16X11X .438/.656T	48.35	51.2	106.0	581.6	6.1	11.4	5.5	14.22	16.66	.438	11.00	.656	7.38
18X10X .438/.656T	49.10	60.3	113.3	741.7	6.9	12.3	6.5	14.44	18.66	.438	10.00	.656	8.26
16X11X .438/.719T	50.69	51.9	113.0	601.4	6.1	11.6	5.3	14.31	16.72	.438	11.00	.719	7.41
18X11X .438/.656T	51.31	61.1	121.6	766.1	6.8	12.5	6.3	15.09	18.66	.438	11.00	.656	8.26
21X 8X .500/.625T	52.70	78.6	117.2	1026.0	7.8	13.1	8.8	15.50	21.63	.500	8.00	.625	10.91
18X12X .438/.656T	53.55	61.7	129.8	788.5	6.8	12.8	6.1	15.75	18.66	.438	12.00	.656	8.26
21X 8X .500/.680T	54.40	79.9	124.2	1063.5	7.8	13.3	8.6	16.00	21.69	.500	8.00	.680	10.94
21X 8X .500/.750T	56.10	81.1	131.0	1099.1	7.9	13.5	8.4	16.50	21.75	.500	8.00	.750	10.97
21X10X .500/.625T	55.95	81.3	135.5	1108.7	7.8	13.6	8.2	16.75	21.63	.500	10.00	.625	10.91
21X 9X .500/.750T	58.65	82.5	142.2	1145.7	7.9	13.9	8.1	17.25	21.75	.500	9.00	.750	10.97

0.1875 - 3/16 in.



•180 IN. PLATE (AREA= 1.34 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	82.4	144.9	1146.3	7.6	13.9	7.9	17.38	21.63	.500	11.00	.625	18.91
21X 8X .500/.875T	59.50	83.3	144.8	1167.1	7.9	14.0	8.1	17.50	21.88	.500	8.00	.875	11.03
21X10X .500/.750T	61.20	83.8	153.0	1188.1	7.8	14.2	7.8	18.00	21.75	.500	10.00	.750	10.97
21X11X .500/.688T	61.40	83.7	154.4	1195.0	7.8	14.2	7.7	18.06	21.69	.500	11.00	.688	10.94
21X13X .500/.688T	66.10	85.7	174.6	1257.5	7.8	14.7	7.2	19.44	21.69	.500	13.00	.688	10.94
21X12X .500/.750T	66.30	86.0	174.8	1264.2	7.8	14.7	7.2	19.50	21.75	.500	12.00	.750	10.97
21X11X .500/.875T	69.44	87.1	182.3	1300.9	7.8	14.9	7.1	20.13	21.88	.500	11.00	.875	11.03
24X 9X .625/.750T	73.95	116.0	178.3	1752.8	8.7	15.1	9.8	21.75	24.75	.625	9.00	.750	15.59
24X10X .625/.750T	76.50	118.0	190.8	1818.0	8.7	15.4	9.5	22.50	24.75	.625	10.00	.750	15.59
24X11X .625/.750T	79.05	119.8	203.0	1878.8	8.7	15.7	9.3	23.25	24.75	.625	11.00	.750	15.59
24X10X .625/.875T	83.75	121.4	209.7	1927.0	9.0	15.9	9.2	23.75	24.88	.625	10.00	.875	15.67
24X 9X .625/1.125T	85.44	125.0	229.2	2048.3	8.8	16.4	8.9	25.13	25.13	.625	9.00	1.125	15.67
24X13X .625/.875T	83.69	126.2	252.2	2108.9	8.7	16.7	8.4	26.38	24.88	.625	13.00	.875	15.67
24X14X .625/1.125T	93.09	128.7	265.1	2193.8	8.7	17.0	8.3	27.38	25.13	.625	14.00	1.125	15.67
24X11X .625/1.125T	93.09	130.3	292.7	2258.3	9.7	17.3	8.0	28.50	25.13	.625	12.00	1.125	15.82
24X12X .625/1.125T	96.90	130.3	292.7	2258.3	9.7	17.3	8.0	28.50	25.13	.625	12.00	1.125	15.82
27X 9X .688/1.125T	97.55	160.7	272.9	2863.7	9.8	17.8	10.5	28.69	28.13	.688	9.00	1.125	19.48
24X16X .625/.875T	98.50	129.9	294.3	2259.2	8.6	17.4	7.7	29.00	24.88	.625	16.00	.875	15.67
27X12X .688/.975T	99.80	160.5	293.0	2874.6	9.7	17.9	10.2	29.06	27.88	.688	12.00	.875	15.67
27X13X .688/.875T	101.80	162.5	298.9	2955.0	9.7	18.2	9.9	29.34	27.88	.688	13.00	.875	19.31
27X11X .688/1.125T	105.20	165.8	313.5	3070.6	9.8	18.5	9.8	30.34	28.13	.688	11.00	1.125	19.48
30X13X .750/.875T	115.19	205.0	350.3	4017.1	10.7	19.6	11.5	33.88	38.88	.750	13.00	.875	23.30
27X14X .688/1.125T	116.65	171.8	373.0	3330.9	9.7	19.4	8.9	34.31	28.13	.688	14.00	1.125	19.48
30X11X .750/1.125T	119.59	209.0	366.7	4169.1	10.7	19.9	11.4	34.89	31.13	.750	11.00	1.125	23.49
27X15X .688/1.125T	120.50	173.4	333.2	3407.7	9.6	19.7	8.7	35.44	28.13	.688	15.00	1.125	19.48
30X12X .750/1.125T	122.40	211.9	399.2	4298.9	10.7	20.3	11.0	36.00	31.13	.750	12.00	1.125	23.49
30X16X .750/.875T	124.10	211.8	403.1	4314.2	10.7	20.4	10.7	36.50	30.88	.750	16.00	.875	23.30
27X16X .688/1.125T	124.30	175.0	412.5	3479.1	9.6	19.9	8.4	36.56	28.13	.688	16.00	1.125	19.48
30X14X .750/1.125T	130.05	217.0	433.7	4528.9	10.7	20.9	10.4	38.25	31.13	.750	14.00	1.125	23.49
30X10X .875/1.375T	136.00	237.7	406.3	4734.0	10.7	19.9	11.7	40.00	31.38	.875	10.00	1.375	27.62
33X12X .875/1.125T	144.03	276.3	460.9	5928.8	11.6	21.5	12.9	42.38	34.13	.875	12.00	1.125	30.03
33X10X .875/1.375T	144.94	278.8	461.8	6008.8	11.7	21.6	13.0	42.63	34.38	.875	12.00	1.375	30.25
36X10X .875/1.125T	145.35	310.4	464.5	6943.2	12.5	22.4	14.9	42.75	37.13	.875	10.00	1.125	32.65
33X11X .875/1.375T	159.60	283.2	491.7	6211.6	11.7	21.9	12.6	44.00	34.38	.875	11.00	1.375	30.25
33X14X .875/1.125T	151.74	283.5	509.7	6252.3	11.7	22.1	12.3	44.63	34.13	.875	14.00	1.125	30.03
36X10X .875/1.500T	158.10	328.2	547.6	7734.1	12.7	23.6	14.1	46.50	37.50	.875	10.00	1.500	32.98
36X14X .875/1.375T	172.55	341.2	649.6	8403.2	12.7	24.6	12.9	50.75	37.38	.875	14.00	1.375	32.87
36X15X .875/1.500T	183.60	350.6	722.3	8895.3	12.7	25.4	12.3	54.00	37.50	.875	15.00	1.500	32.98

0.1875 - 3/16 in.

NOMINAL SIZE			SECTION MODULUS			BEAM DIMENSIONS			FLANGE			SHEAR		
	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WEB	WIDTH	THICK	SHEAR
3X 2X .125/ .100T	2.55	4.8	1.5	3.9	1.2	.8	2.6	.75	3.19	.125	.125	2.00	.188	.43
4X 2X .125/ .100T	2.99	6.4	2.1	7.0	1.6	1.1	3.3	.80	4.19	.125	.125	2.00	.188	.55
3X 3X .125/ .100T	3.20	5.1	2.1	5.0	1.3	1.8	2.4	.94	3.19	.125	.125	3.00	.188	.43
5X 2X .125/ .100T	3.40	8.1	2.8	11.2	2.0	1.4	4.0	1.00	5.19	.125	.125	2.00	.188	.60
4X 3X .125/ .100T	3.60	6.8	2.8	8.7	1.7	1.3	3.1	1.06	4.19	.125	.125	3.00	.188	.55
5X 3X .125/ .100T	4.05	8.5	3.7	13.9	2.2	1.6	3.8	1.19	5.19	.125	.125	3.00	.188	.66
4X 2X .150/ .131T	4.69	7.0	3.3	10.1	1.8	1.4	3.1	1.38	4.31	.188	.188	2.00	.313	.85
3X 3X .150/ .131T	5.10	5.5	3.2	7.2	1.5	1.3	2.7	1.50	3.31	.188	.188	3.00	.313	.66
5X 2X .150/ .131T	5.30	8.6	4.3	15.9	2.2	1.8	3.7	1.56	5.31	.188	.188	2.00	.313	1.04
6X 2X .150/ .131T	5.95	10.7	5.4	23.4	2.6	2.2	4.3	1.75	6.31	.188	.188	2.00	.313	1.23
7X 2X .150/ .131T	6.15	12.2	5.8	29.4	2.8	2.4	5.1	1.81	7.25	.188	.188	2.00	.313	1.40
5X 3X .150/ .131T	6.39	9.3	5.8	19.7	2.3	2.1	3.4	1.88	5.31	.188	.188	3.00	.313	1.04
5X 4X .150/ .131T	6.60	9.3	6.0	20.0	2.3	2.2	3.3	1.94	5.25	.188	.188	4.00	.250	1.03
7X 3X .150/ .131T	7.00	12.9	7.4	35.1	3.0	2.7	4.7	2.06	7.25	.188	.188	3.00	.250	1.40
6X 4X .150/ .131T	7.24	11.3	7.5	29.2	2.7	2.6	3.9	2.13	6.25	.188	.188	4.00	.250	1.22
5X 4X .150/ .131T	7.45	9.6	7.2	22.7	2.4	2.4	3.2	2.19	5.31	.188	.188	4.00	.313	1.04
7X 3X .188/ .313T	7.65	13.3	8.5	39.2	3.1	2.9	4.6	2.25	7.31	.188	.188	3.00	.313	1.42
7X 4X .188/ .313T	7.85	13.3	8.8	40.1	3.1	3.0	4.5	2.31	7.25	.188	.188	4.00	.250	1.40
6X 4X .188/ .313T	8.09	11.6	8.0	32.8	2.8	2.8	3.7	2.38	6.31	.188	.188	4.00	.313	1.23
7X 4X .188/ .313T	8.70	13.7	10.5	44.8	3.2	3.3	4.3	2.56	7.31	.188	.188	4.00	.313	1.42
6X 5X .188/ .313T	9.15	11.9	10.5	36.5	2.8	3.1	3.5	2.69	6.31	.188	.188	5.00	.313	1.23
7X 5X .188/ .313T	9.55	12.1	9.4	35.3	2.8	2.9	3.8	2.88	6.44	.250	.250	3.00	.430	1.66
6X 6X .250/ .375T	9.79	14.1	12.5	49.9	3.3	3.5	4.8	2.88	7.31	.188	.188	5.00	.313	1.42
6X 4X .250/ .375T	10.20	12.2	10.4	37.1	2.8	3.0	3.6	3.00	6.30	.250	.250	4.00	.375	1.65
7X 3X .250/ .438T	10.40	14.3	11.3	48.4	3.1	3.4	4.3	3.06	7.44	.250	.250	3.00	.430	1.91
8X 3X .250/ .375T	10.64	16.3	12.1	59.6	3.5	3.7	4.9	3.13	8.30	.250	.250	3.00	.375	2.15
9X 3X .250/ .313T	10.85	18.1	12.6	70.9	3.8	3.9	5.6	3.19	9.31	.250	.250	3.00	.313	2.38
8X 4X .250/ .313T	11.05	16.												

0.2188 - 7/32 in.



219 IN. PLATE (AREA= 1.82 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	THICK	WEB	FLANGE	WIDTH	THICK	THICK	AREA	AREA
8X 6X .250/.438T	15.74	18.0	22.2	86.1	3.7	4.8	3.9	4.63	8.44	.250	6.00	6.00	.438	.438	2.16	2.16
10X 5X .250/.438T	15.95	22.9	127.3	4.4	5.5	5.1	4.69	10.44	.250	.250	5.00	5.00	.438	.438	2.66	2.66
10X 6X .250/.375T	16.15	22.9	25.5	120.1	4.4	5.6	5.0	4.75	10.38	.250	6.00	6.00	.375	.375	2.65	2.65
9X 7X .250/.375T	16.59	20.6	25.4	109.2	4.0	5.3	4.3	4.88	9.38	.250	7.00	7.00	.375	.375	2.40	2.40
8X 7X .250/.438T	17.20	18.3	25.1	91.5	3.6	5.0	3.7	5.06	8.44	.250	7.00	7.00	.438	.438	2.16	2.16
10X 7X .250/.375T	17.44	23.3	28.7	136.4	4.4	5.8	4.8	5.13	10.38	.250	7.00	7.00	.375	.375	2.65	2.65
9X 7X .250/.438T	18.05	21.0	28.6	116.9	4.0	5.6	4.1	5.31	9.44	.250	7.00	7.00	.438	.438	2.41	2.41
10X 4X .313/.563T	19.29	24.3	26.0	135.4	4.3	5.6	5.2	5.38	10.56	.313	4.00	4.00	.563	.563	3.37	3.37
12X 4X .313/.406T	18.29	28.9	26.8	175.5	4.9	6.1	6.5	5.38	12.41	.313	4.00	4.00	.406	.406	3.95	3.95
8X 8X .250/.438T	18.70	18.5	28.0	96.4	3.6	5.2	3.4	5.50	8.44	.250	8.00	8.00	.438	.438	2.16	2.16
10X 7X .250/.438T	18.30	23.8	32.1	145.7	4.4	6.1	4.5	5.56	10.44	.250	7.00	7.00	.438	.438	2.66	2.66
12X 4X .313/.469T	19.14	29.5	29.1	185.8	5.0	6.3	6.4	5.63	12.47	.313	4.00	4.00	.469	.469	3.97	3.97
9X 8X .250/.438T	19.55	21.2	31.8	123.0	4.0	5.8	3.9	5.75	9.44	.250	8.00	8.00	.438	.438	2.41	2.41
12X 5X .313/.406T	19.65	29.7	30.7	190.8	5.0	6.4	6.2	5.78	12.41	.313	5.00	5.00	.406	.406	3.95	3.95
12X 4X .313/.531T	19.93	30.1	31.4	195.9	5.0	6.5	6.2	5.88	12.53	.313	4.00	4.00	.531	.531	3.99	3.99
10X 8X .250/.438T	20.40	24.1	35.7	153.3	4.4	6.4	4.3	6.00	10.44	.250	8.00	8.00	.438	.438	2.66	2.66
12X 5X .313/.469T	20.71	30.4	33.6	202.5	5.1	6.7	6.0	6.09	12.47	.313	5.00	5.00	.469	.469	3.97	3.97
12X 6X .313/.406T	21.05	30.5	34.6	204.7	5.1	6.7	5.9	6.13	12.41	.313	6.00	6.00	.406	.406	3.95	3.95
12X 5X .313/.531T	21.79	31.0	36.5	213.6	5.1	6.9	5.9	6.41	12.53	.313	5.00	5.00	.531	.531	3.99	3.99
12X 6X .313/.469T	22.30	31.1	38.1	217.3	5.1	7.0	5.7	6.56	12.47	.313	6.00	6.00	.469	.469	3.97	3.97
12X 7X .313/.406T	22.41	31.1	38.6	217.4	5.1	7.0	5.6	6.59	12.41	.313	7.00	7.00	.406	.406	3.95	3.95
12X 6X .313/.531T	23.60	31.7	41.5	229.2	5.1	7.2	5.5	6.34	12.53	.313	6.00	6.00	.531	.531	3.99	3.99
12X 7X .313/.469T	23.90	31.7	42.6	230.7	5.1	7.3	5.4	7.03	12.47	.313	7.00	7.00	.469	.469	3.97	3.97
14X 4X .375/.469T	24.24	37.8	37.3	275.8	5.6	7.3	7.4	7.13	14.47	.375	4.00	4.00	.469	.469	5.51	5.51
14X 4X .375/.531T	25.09	38.6	39.8	289.2	5.6	7.5	7.3	7.38	14.53	.375	4.00	4.00	.531	.531	5.53	5.53
12X 7X .313/.531T	25.40	32.3	46.6	243.0	5.1	7.5	5.2	7.47	12.53	.313	7.00	7.00	.531	.531	3.99	3.99
12X 8X .313/.469T	25.50	32.2	47.1	242.6	5.1	7.5	5.2	7.50	12.47	.313	8.00	8.00	.469	.469	3.97	3.97
14X 4X .375/.594T	25.94	39.3	42.4	302.1	5.7	7.7	7.1	7.63	14.59	.375	4.00	4.00	.594	.594	5.55	5.55
12X 5X .375/.656T	26.45	33.7	43.1	243.8	5.0	7.2	5.7	7.78	12.66	.375	5.00	5.00	.656	.656	4.83	4.83
14X 4X .375/.656T	26.79	40.0	44.9	314.6	5.7	7.9	7.0	7.88	14.66	.375	4.00	4.00	.656	.656	5.58	5.58
14X 5X .375/.531T	26.89	39.9	45.6	313.8	5.7	7.9	6.9	7.91	14.53	.375	5.00	5.00	.531	.531	5.53	5.53
12X 8X .313/.531T	27.20	32.7	51.6	255.4	5.1	7.8	4.9	8.00	12.53	.313	8.00	8.00	.531	.531	3.99	3.99
14X 6X .375/.531T	28.70	40.9	51.5	336.0	5.7	8.2	6.5	8.44	14.53	.375	5.00	5.00	.531	.531	5.53	5.53
14X 7X .375/.656T	29.00	41.3	52.0	342.1	5.7	8.3	6.6	8.53	14.66	.375	5.00	5.00	.656	.656	5.58	5.58
12X 9X .313/.531T	29.00	33.1	56.5	338.2	5.7	8.3	6.4	8.53	14.47	.375	7.00	7.00	.469	.469	5.51	5.51
14X 6X .375/.594T	29.95	41.6	55.3	266.4	5.1	8.0	4.7	8.53	12.53	.313	9.00	9.00	.531	.531	3.99	3.99
14X 7X .375/.531T	30.50	41.7	57.1	355.7	5.7	8.5	6.2	8.97	14.53	.375	7.00	7.00	.531	.531	5.53	5.53
14X 8X .375/.469T	30.60	41.7	57.7	355.3	5.7	8.5	6.2	8.97	14.47	.375	8.00	8.00	.469	.469	5.51	5.51
12X 10X .313/.531T	30.60	33.5	61.5	276.3	5.0	8.3	4.5	9.06	12.53	.313	10.00	10.00	.531	.531	3.99	3.99
14X 6X .375/.656T	31.25	42.3	58.9	366.2	5.8	8.7	6.2	9.19	14.66	.375	6.00	6.00	.656	.656	5.58	5.58
14X 7X .375/.531T	31.99	42.4	61.6	372.1	5.8	8.8	5.0	9.41	14.59	.375	7.00	7.00	.531	.531	5.55	5.55
14X 8X .375/.594T	32.30	42.4	62.9	373.7	5.7	8.8	5.9	9.50	14.53	.375	8.00	8.00	.594	.594	5.53	5.53
16X 5X .388/.531T	32.84	50.4	56.4	445.9	6.2	8.8	7.9	9.66	16.53	.438	5.00	5.00	.531	.531	7.34	7.34
16X 5X .438/.594T	33.90	51.4	60.0	465.1	6.3	9.1	7.8	9.97	16.59	.438	5.00	5.00	.594	.594	7.36	7.36

0.2188 - 7/32 in.



•Z19 IN. PLATE (AREA = 1.02 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	FLANGE THICK	
14X 8X .375/.594T	34.00	43.2	68.0	391.0	5.8	9.1	5.7	10.00	14.59	.375	8.00	.594	5.55
14X 9X .375/.531T	34.10	43.1	68.5	380.8	5.7	9.1	5.7	10.03	14.53	.375	9.00	.531	5.53
16X 6X .438/.531T	34.65	51.8	62.9	475.0	6.3	9.2	7.6	10.19	16.53	.438	6.00	.531	7.34
16X 5X .438/.656T	34.95	52.2	63.5	483.7	6.3	9.3	7.6	10.28	16.66	.438	5.00	.656	7.39
12X10X .375/.594T	35.50	36.0	67.7	381.2	5.0	8.4	4.4	10.44	12.59	.375	10.00	.594	4.80
14X 8X .375/.656T	35.70	43.8	72.0	486.7	5.7	9.3	5.6	10.50	14.66	.375	8.00	.656	5.50
16X 6X .438/.594T	35.90	52.8	67.2	496.7	6.3	9.4	7.4	10.56	16.59	.438	6.00	.594	7.36
14X10X .375/.531T	35.90	43.6	74.2	495.0	5.7	9.3	5.5	10.56	14.53	.375	10.00	.531	5.53
16X 5X .438/.719T	36.01	53.1	67.0	501.5	6.4	9.5	7.5	10.59	16.72	.438	5.00	.719	7.42
14X 9X .375/.594T	36.81	43.8	74.2	487.6	5.7	9.3	5.5	10.59	14.59	.375	9.00	.594	5.55
16X 6X .438/.656T	37.20	53.6	71.3	516.8	6.4	9.6	7.2	10.94	16.66	.438	6.00	.656	7.39
18X 6X .438/.531T	37.60	61.1	73.2	624.3	7.0	10.2	8.5	11.06	18.53	.438	6.00	.531	8.21
18X 5X .438/.656T	37.94	61.6	73.9	633.9	7.0	10.3	8.5	11.16	18.66	.438	5.00	.656	8.27
14X10X .375/.594T	38.05	44.3	88.5	422.9	5.7	9.6	5.3	11.19	14.59	.375	10.00	.594	5.55
16X 6X .438/.719T	38.45	54.5	75.6	536.1	6.4	9.8	7.1	11.31	16.72	.438	6.00	.719	7.42
18X 6X .438/.594T	38.90	62.2	78.1	651.1	7.0	10.5	8.3	11.44	18.59	.438	6.00	.594	8.24
18X 5X .438/.719T	39.00	62.5	77.8	656.6	7.0	10.5	8.4	11.47	18.72	.438	5.00	.719	8.30
16X 8X .438/.594T	39.95	54.9	81.3	551.2	6.4	10.0	6.8	11.75	16.59	.438	8.00	.594	7.36
16X 9X .438/.531T	40.05	54.8	82.0	558.4	6.4	10.0	6.7	11.78	16.53	.438	9.00	.531	7.34
14X11X .375/.594T	40.05	44.7	86.9	437.1	5.7	9.8	5.0	11.78	14.59	.375	11.00	.594	5.55
18X 7X .438/.594T	40.90	63.6	86.0	687.7	7.0	10.8	8.0	12.03	18.59	.438	7.00	.594	8.24
18X 8X .438/.531T	41.24	63.7	87.6	691.4	7.0	10.9	7.9	12.13	18.53	.438	8.00	.531	8.21
18X 6X .438/.719T	41.45	64.2	87.4	701.1	7.1	10.9	8.0	12.19	18.72	.438	6.00	.719	8.30
16X10X .438/.531T	41.85	55.6	88.5	572.0	6.4	10.3	6.5	12.31	16.53	.438	10.00	.531	7.34
16X 9X .438/.594T	41.96	55.8	88.4	575.1	6.4	10.3	6.5	12.34	16.59	.438	9.00	.594	7.36
18X 7X .438/.656T	42.40	63.9	90.4	786.3	7.0	11.1	7.8	12.47	18.66	.438	7.00	.656	8.27
18X11X .375/.656T	42.40	45.3	93.3	453.7	5.6	10.0	4.9	12.47	18.66	.375	11.00	.656	5.58
18X 9X .438/.531T	43.04	64.8	94.7	721.1	7.1	11.1	7.6	12.66	18.53	.438	9.00	.531	8.21
18X 8X .438/.594T	44.00	56.6	95.6	597.3	6.4	10.6	6.2	12.94	16.59	.438	10.00	.594	7.36
18X10X .438/.656T	44.64	65.9	100.1	750.3	7.1	11.4	7.5	13.13	18.66	.438	8.00	.656	8.27
18X11X .438/.594T	46.00	57.2	102.4	617.3	6.3	10.8	6.0	13.53	16.59	.438	11.00	.594	7.36
18X 9X .438/.656T	46.10	57.4	102.4	620.9	6.4	10.8	6.1	13.56	16.66	.438	10.00	.656	7.39
18X10X .438/.594T	46.85	67.0	108.9	782.7	7.1	11.7	7.2	13.78	18.66	.438	9.00	.656	8.27
18X10X .438/.656T	46.95	66.8	109.4	791.7	7.1	11.7	7.1	13.81	18.59	.438	10.00	.656	8.24
18X10X .438/.719T	48.25	58.2	109.4	683.4	6.3	11.1	5.9	14.19	16.72	.438	10.00	.719	7.42
18X11X .438/.656T	48.35	58.1	118.1	681.7	6.3	11.0	5.8	14.22	16.66	.438	11.00	.656	7.39
18X10X .438/.656T	49.10	67.9	117.5	812.2	7.1	12.0	6.9	14.44	18.66	.438	10.00	.656	8.27
18X11X .438/.719T	50.69	58.8	117.5	684.8	6.3	11.3	5.7	14.91	16.72	.438	11.00	.719	7.42
18X11X .438/.656T	51.31	68.7	126.1	839.5	7.0	12.2	6.7	15.09	18.66	.438	11.00	.656	8.27
21X 8X .500/.625T	52.70	86.9	121.2	1105.7	8.0	12.7	9.1	15.50	21.63	.500	8.00	.625	10.92
18X12X .438/.656T	53.55	69.4	134.6	864.7	7.0	12.5	6.4	15.75	18.66	.438	12.00	.656	8.27
21X 8X .500/.688T	54.40	88.3	128.5	1186.4	8.0	13.0	8.9	16.00	21.69	.500	8.00	.688	10.95
21X 8X .500/.750T	56.10	89.6	135.5	1195.0	8.0	13.2	8.7	16.50	21.75	.500	8.00	.750	10.98
21X10X .500/.625T	56.95	89.8	140.1	1195.8	8.0	13.3	8.5	16.75	21.63	.500	10.00	.625	10.92
21X 9X .500/.750T	58.65	91.1	147.0	1236.0	8.1	13.6	8.4	17.25	21.75	.500	9.00	.750	10.98

0.2188 - 7/32 in.

.....

0.2188 - 7/32 in.



.250 IN. PLATE (AREA= 2.38 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	VP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL						WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .125/ .188T	2.55	5.9	1.5	4.2	1.2	2.7	.75	3.19	.125	2.00	.188	.43
4X 2X .125/ .188T	2.99	7.9	2.1	7.5	1.5	3.5	.88	4.19	.125	2.00	.188	.56
3X 3X .125/ .188T	3.20	6.3	2.1	5.4	1.3	2.6	.94	3.19	.125	3.00	.188	.43
5X 2X .125/ .188T	3.40	10.1	2.8	12.0	1.9	4.2	1.00	5.19	.125	2.00	.188	.68
4X 3X .125/ .188T	3.60	8.4	2.9	9.5	1.7	3.3	1.06	4.19	.125	3.00	.188	.56
5X 3X .125/ .188T	4.05	10.7	3.7	15.1	2.1	4.0	1.19	5.19	.125	3.00	.188	.68
4X 2X .188/ .313T	4.69	8.7	3.3	11.0	1.7	3.3	1.38	4.31	.188	2.00	.313	.86
3X 3X .188/ .313T	5.10	6.9	3.3	7.9	1.4	2.4	1.50	3.31	.188	3.00	.313	.67
5X 2X .188/ .313T	5.30	11.0	4.4	17.4	2.1	4.0	1.56	5.31	.188	2.00	.313	1.05
6X 2X .188/ .313T	5.95	13.3	5.5	25.7	2.5	4.6	1.75	6.31	.188	2.00	.313	1.23
7X 2X .188/ .250T	6.15	15.1	6.0	32.1	2.8	5.4	1.81	7.25	.188	2.00	.250	1.41
5X 3X .188/ .313T	6.39	11.6	5.9	21.7	2.3	3.7	1.88	5.31	.188	3.00	.313	1.05
5X 4X .188/ .250T	6.60	11.6	6.2	22.2	2.3	3.6	1.94	5.25	.188	4.00	.250	1.03
7X 3X .188/ .250T	7.00	15.9	7.6	38.6	2.9	5.1	2.06	7.25	.188	3.00	.250	1.41
6X 4X .188/ .250T	7.24	14.1	7.7	32.3	2.7	4.2	2.13	6.25	.188	4.00	.250	1.22
5X 4X .188/ .313T	7.45	12.0	7.3	25.3	2.4	3.4	2.19	5.31	.188	4.00	.313	1.05
7X 3X .188/ .313T	7.65	16.5	8.8	43.3	3.1	4.9	2.25	7.31	.188	3.00	.313	1.42
7X 4X .188/ .250T	7.85	16.5	9.2	44.4	3.1	4.8	2.31	7.25	.188	4.00	.250	1.41
6X 4X .188/ .313T	8.09	14.5	9.0	36.5	2.8	4.0	2.38	6.31	.188	4.00	.313	1.23
7X 4X .188/ .313T	8.70	17.0	10.8	49.9	3.2	4.6	2.56	7.31	.188	4.00	.313	1.42
6X 5X .188/ .313T	9.15	14.8	10.8	41.0	2.8	3.8	2.69	6.31	.188	5.00	.313	1.23
6X 3X .250/ .438T	9.55	15.0	9.7	33.3	2.8	4.1	2.81	6.44	.250	3.00	.438	1.67
7X 5X .188/ .313T	9.79	17.5	12.8	58.0	3.3	4.4	2.88	7.31	.188	5.00	.313	1.42
10.20	15.1	10.7	10.7	41.6	2.8	3.9	3.00	6.38	.250	4.00	.375	1.66
7X 4X .250/ .438T	10.40	17.6	11.6	53.9	3.1	4.6	3.06	7.44	.250	3.00	.438	1.92
8X 3X .250/ .375T	10.64	19.9	12.5	66.2	3.5	5.3	3.13	8.38	.250	3.00	.375	2.16
10.45	22.0	13.1	13.1	78.4	3.8	6.0	3.19	9.31	.250	3.00	.313	2.39
8X 4X .250/ .313T	11.05	20.1	13.5	69.0	3.5	5.1	3.25	8.31	.250	4.00	.313	2.14
8X 3X .250/ .438T	11.25	20.4	13.7	71.2	3.5	5.2	3.31	8.44	.250	3.00	.438	2.17
11.49	22.6	14.5	14.5	85.1	3.8	5.9	3.38	9.38	.250	3.00	.375	2.41
10X 3X .250/ .313T	11.70	24.8	15.1	99.0	4.1	6.6	3.44	10.31	.250	3.00	.313	2.64
8X 4X .250/ .375T	11.90	20.6	15.1	75.2	3.6	5.0	3.50	8.38	.250	4.00	.375	2.16
9X 3X .250/ .438T	12.10	23.2	15.9	91.4	3.9	5.7	3.56	9.44	.250	3.00	.438	2.42
10X 3X .250/ .375T	12.34	25.5	16.6	106.8	4.2	6.4	3.63	10.38	.250	3.00	.375	2.66
10X 4X .250/ .313T	12.75	25.8	17.8	111.1	4.3	6.2	3.75	10.31	.250	4.00	.313	2.64
9X 5X .250/ .313T	12.95	23.5	18.1	97.7	4.0	5.4	3.81	9.31	.250	5.00	.313	2.39
8X 5X .250/ .375T	13.19	21.2	17.8	83.5	3.7	4.7	3.88	8.38	.250	5.00	.375	2.16
10X 4X .250/ .375T	13.60	26.4	19.9	120.7	4.4	6.1	4.00	10.38	.250	5.00	.375	2.66
10X 5X .250/ .313T	13.90	26.5	20.5	122.1	4.4	6.0	4.06	10.31	.250	5.00	.313	2.64
9X 5X .250/ .375T	14.04	24.1	20.4	106.5	4.0	5.2	4.13	9.38	.250	5.00	.375	2.41
8X 5X .250/ .438T	14.25	21.6	19.9	90.0	3.7	4.5	4.19	8.44	.250	5.00	.438	2.17
10X 4X .250/ .438T	14.45	27.0	22.0	123.5	4.4	5.9	4.25	10.44	.250	4.00	.438	2.67
10X 5X .250/ .375T	14.89	27.2	23.1	132.8	4.4	5.7	4.38	10.38	.250	5.00	.375	2.66
9X 5X .250/ .438T	15.10	24.6	22.8	114.8	4.1	5.0	4.44	9.44	.250	5.00	.438	2.42
9X 6X .250/ .375T	15.30	24.6	23.3	115.3	4.1	4.9	4.50	9.38	.250	6.00	.375	2.41

0.2500 - 1/4 in.



0.250 IN. PLATE (AREA = 2.38 SQ. IN.)

***** BEAM DIMENSIONS *****												
NOMINAL SIZE		SECTION MODULUS			R	Y <sub>P</sub>	V <sub>F</sub>	AREA	DEPTH	WEB THICK	FLANGE	
WT/FT	Z <sub>PL</sub>	Z <sub>FL</sub>	INERTIA	WIDTH							THICK	
8X 6X .250/ .438T	15.74	22.0	22.9	97.5	3.7	4.4	4.3	4.63	8.44	.250	6.00	.438
10X 5X .250/ .438T	15.95	27.8	25.8	142.8	4.5	5.1	5.5	4.69	10.44	.250	5.00	.438
10X 6X .250/ .375T	16.15	27.8	26.4	143.8	4.5	5.2	5.4	4.75	10.38	.250	6.00	.375
9X 7X .250/ .375T	16.59	25.0	26.3	123.4	4.1	4.9	4.7	4.88	9.38	.250	7.00	.375
8X 7X .250/ .438T	17.20	22.3	25.9	104.2	3.7	4.7	4.0	5.06	8.44	.250	7.00	.438
10X 7X .250/ .375T	17.44	28.2	29.7	153.7	4.5	5.4	5.2	5.13	10.38	.250	7.00	.375
9X 7X .250/ .438T	18.05	25.5	29.5	132.6	4.2	5.2	4.5	5.31	9.44	.250	7.00	.438
10X 4X .313/ .563T	18.29	29.0	27.0	151.3	4.4	5.2	5.6	5.38	10.56	.313	4.00	.563
12X 4X .313/ .406T	18.70	34.2	27.8	194.3	5.0	5.7	7.0	5.38	12.41	.313	4.00	.406
8X 8X .250/ .438T	18.90	28.8	33.2	164.8	4.6	5.7	5.0	5.56	10.44	.250	7.00	.438
10X 7X .250/ .438T	18.90	28.8	33.2	164.8	4.6	5.7	5.0	5.56	10.44	.250	7.00	.438
12X 4X .313/ .469T	19.14	35.0	30.2	206.1	5.1	5.9	6.8	5.63	12.47	.313	4.00	.469
9X 8X .250/ .438T	19.55	25.8	32.9	140.1	4.2	5.4	4.3	5.75	9.44	.250	8.00	.438
12X 5X .313/ .406T	19.65	35.2	31.9	211.8	5.1	6.0	6.6	5.78	12.41	.313	5.00	.406
12X 4X .313/ .531T	19.99	35.6	32.6	217.5	5.1	6.1	6.7	5.88	12.53	.313	4.00	.531
10X 8X .250/ .438T	20.40	29.1	36.9	174.0	4.6	6.0	4.7	6.00	10.44	.250	8.00	.438
12X 5X .313/ .469T	20.71	36.0	34.9	225.3	5.2	6.3	6.5	6.09	12.47	.313	5.00	.469
12X 6X .313/ .406T	21.05	36.1	35.9	227.8	5.2	6.3	6.3	6.19	12.41	.313	6.00	.406
12X 5X .313/ .531T	21.79	36.7	37.9	238.0	5.2	6.5	6.3	6.41	12.53	.313	5.00	.531
12X 6X .313/ .469T	22.30	36.8	39.5	242.4	5.2	6.6	6.1	6.56	12.47	.313	6.00	.469
12X 7X .313/ .406T	22.41	36.8	40.0	252.7	5.2	6.6	6.1	6.59	12.41	.313	7.00	.406
12X 6X .313/ .531T	23.60	37.5	43.1	256.2	5.2	6.8	5.9	6.94	12.53	.313	6.00	.531
12X 7X .313/ .469T	23.90	37.5	44.2	258.0	5.2	6.9	5.8	7.03	12.47	.313	7.00	.469
14X 4X .375/ .469T	24.24	44.0	38.8	303.2	5.6	6.9	7.8	7.13	14.47	.375	4.00	.469
14X 4X .375/ .531T	25.09	44.9	41.4	314.3	5.7	7.1	7.7	7.38	14.53	.375	4.00	.531
12X 7X .313/ .531T	25.40	38.2	49.3	272.4	5.3	7.1	5.6	7.47	12.53	.313	7.00	.531
12X 8X .313/ .469T	25.50	38.1	48.8	272.1	5.2	7.1	5.6	7.50	12.47	.313	8.00	.469
14X 4X .375/ .594T	25.94	45.7	44.1	332.9	5.8	7.3	7.6	7.63	14.59	.375	4.00	.594
12X 5X .375/ .656T	26.45	39.5	44.8	270.9	5.2	6.9	6.0	7.78	12.66	.375	5.00	.656
14X 4X .375/ .656T	26.79	46.4	46.6	346.8	5.8	7.5	7.4	7.88	14.66	.375	4.00	.656
14X 5X .375/ .531T	26.89	46.3	47.4	346.0	5.8	7.5	7.3	7.91	14.53	.375	5.00	.531
12X 8X .313/ .531T	27.20	38.7	53.5	287.0	5.3	7.4	5.4	8.00	12.53	.313	8.00	.531
14X 6X .375/ .531T	28.70	47.4	53.4	371.3	5.9	7.8	6.9	8.44	14.53	.375	6.00	.531
14X 5X .375/ .656T	29.00	47.8	54.0	378.0	5.9	7.9	7.0	8.53	14.66	.375	5.00	.656
14X 7X .375/ .469T	29.00	47.5	54.6	373.8	5.9	7.9	6.8	8.53	14.47	.375	7.00	.469
12X 9X .313/ .531T	29.00	39.2	58.6	300.1	5.2	7.7	5.1	8.53	12.53	.313	9.00	.531
14X 6X .375/ .594T	29.95	48.2	57.4	388.8	5.9	8.1	6.8	8.81	14.59	.375	6.00	.594
14X 7X .375/ .531T	30.50	48.4	59.3	393.7	5.9	8.1	6.6	8.37	14.53	.375	7.00	.531
14X 8X .375/ .469T	30.50	48.3	59.8	393.3	5.9	8.1	6.6	9.00	14.47	.375	8.00	.469
12X10X .313/ .531T	30.80	39.6	63.7	311.9	5.2	7.9	4.9	9.06	12.53	.313	10.00	.531
14X 6X .375/ .656T	31.25	49.0	61.2	405.6	5.9	8.3	6.6	9.19	14.66	.375	6.00	.656
14X 7X .375/ .594T	31.99	49.2	63.9	412.4	5.9	8.4	6.5	9.41	14.59	.375	7.00	.594
14X 8X .375/ .531T	32.30	49.2	65.2	414.3	5.9	8.4	6.4	9.50	14.53	.375	8.00	.531
16X 5X .438/ .531T	32.84	57.5	58.6	487.0	6.4	8.5	8.3	9.66	16.53	.438	5.00	.531
16X 5X .438/ .594T	33.90	58.5	62.3	508.2	6.4	8.7	8.2	9.97	16.59	.438	5.00	.594

0.2500 - 1/4 in.

•250 IN. PLATE (AREA= 2.38 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	THICK	DIMENSIONS			SHEAR
		ZPL	ZFL	INERTIA							WEB	FLANGE	THICK	
14X 8X .375/.594T	34.00	50.0	70.6	438.1	5.9	8.7	6.2	10.00	14.59	.375	.375	8.00	.594	5.57
14X 9X .375/.531T	34.10	49.9	71.1	433.2	5.9	8.7	6.1	10.03	14.53	.375	.375	9.00	.531	5.54
16X 6X .438/.531T	34.65	59.0	65.3	520.2	6.4	8.8	8.0	10.19	16.53	.438	.438	6.00	.531	7.35
16X 5X .438/.556T	34.95	59.5	65.9	528.8	6.5	8.9	8.0	10.28	16.66	.438	.438	5.00	.556	7.41
12X10X .375/.594T	35.50	42.1	70.3	337.9	5.1	8.0	4.8	10.44	12.59	.375	.375	10.00	.594	4.92
14X 8X .375/.556T	35.70	50.7	75.5	452.2	5.9	8.9	6.0	10.50	14.66	.375	.375	8.00	.556	5.59
16X 6X .438/.594T	35.90	60.1	69.7	583.4	6.5	9.0	7.8	10.56	16.59	.438	.438	6.00	.594	7.38
14X10X .375/.531T	35.90	50.5	76.9	450.4	5.9	8.9	5.9	10.56	14.53	.375	.375	10.00	.531	5.54
16X 5X .438/.719T	36.01	60.4	69.5	588.7	6.5	9.1	7.9	10.59	16.72	.438	.438	5.00	.719	7.43
14X 9X .375/.594T	36.01	50.7	77.0	453.4	5.9	9.0	5.9	10.59	14.59	.375	.375	9.00	.594	5.57
16X 6X .438/.556T	37.20	61.1	74.0	565.8	6.5	9.3	7.6	10.94	16.66	.438	.438	6.00	.556	7.41
18X 6X .438/.531T	37.60	69.1	76.8	679.5	7.1	9.8	8.9	11.06	18.53	.438	.438	6.00	.531	8.23
18X 5X .438/.556T	37.94	69.6	76.6	690.0	7.1	9.9	9.0	11.16	18.66	.438	.438	5.00	.556	8.28
14X10X .375/.594T	38.05	51.2	83.5	471.2	5.9	9.2	5.6	11.19	14.59	.375	.375	10.00	.594	5.57
16X 6X .438/.719T	38.45	62.0	73.4	587.3	6.6	9.5	7.5	11.31	16.72	.438	.438	6.00	.719	7.43
18X 6X .438/.594T	38.90	70.3	81.0	709.1	7.2	10.1	8.8	11.44	18.59	.438	.438	6.00	.594	8.25
18X 5X .438/.719T	39.00	70.7	80.7	714.9	7.2	10.1	8.9	11.47	18.72	.438	.438	5.00	.719	8.31
16X 8X .438/.594T	39.95	62.5	84.3	604.3	6.5	9.7	7.2	11.75	16.59	.438	.438	8.00	.594	8.25
16X 9X .438/.531T	40.05	62.4	85.0	603.8	6.5	9.7	7.1	11.78	16.53	.438	.438	9.00	.531	7.35
14X11X .375/.594T	40.05	51.7	90.1	487.7	5.9	9.4	5.4	11.78	14.59	.375	.375	11.00	.594	5.57
18X 7X .438/.594T	40.90	71.9	89.1	749.7	7.2	10.4	8.4	12.03	18.59	.438	.438	7.00	.594	8.25
18X 8X .438/.531T	41.24	72.0	90.8	753.9	7.2	10.5	8.3	12.13	18.53	.438	.438	8.00	.531	8.23
18X 6X .438/.719T	41.45	72.6	90.6	764.3	7.2	10.5	8.4	12.19	18.72	.438	.438	6.00	.719	8.31
16X10X .438/.531T	41.85	63.3	91.7	628.1	6.5	9.9	6.9	12.31	16.53	.438	.438	10.00	.531	7.35
16X 9X .438/.594T	41.96	63.5	91.6	631.5	6.6	9.9	6.9	12.34	16.59	.438	.438	9.00	.594	7.38
18X 7X .438/.556T	42.40	72.2	93.7	771.3	7.2	10.7	8.2	12.47	18.66	.438	.438	7.00	.556	8.28
14X11X .375/.556T	42.40	52.4	96.8	506.9	5.8	9.7	5.2	12.47	14.66	.375	.375	11.00	.556	5.59
18X 9X .438/.531T	43.04	73.2	98.1	787.0	7.2	10.8	8.0	12.66	18.53	.438	.438	9.00	.531	8.23
16X10X .438/.594T	44.00	64.3	99.0	656.6	6.5	10.2	6.6	12.94	16.59	.438	.438	10.00	.594	7.38
18X 8X .438/.556T	44.64	74.4	103.7	819.3	7.3	11.0	7.9	13.13	18.66	.438	.438	8.00	.556	8.28
16X11X .438/.594T	46.00	65.1	106.1	679.1	6.5	10.4	6.4	13.53	16.59	.438	.438	11.00	.594	7.38
16X10X .438/.556T	46.10	65.3	106.0	683.1	6.5	10.5	6.4	13.56	16.66	.438	.438	10.00	.556	7.41
18X 9X .438/.556T	46.85	75.6	112.7	855.5	7.3	11.3	7.6	13.78	18.66	.438	.438	9.00	.556	8.25
16X10X .438/.594T	46.95	75.5	113.7	854.5	7.3	11.3	7.5	13.81	18.59	.438	.438	10.00	.594	8.25
16X10X .438/.719T	48.25	66.1	113.3	708.6	6.5	10.7	6.3	14.19	16.72	.438	.438	10.00	.719	7.43
16X11X .438/.556T	48.35	66.0	114.0	706.8	6.5	10.7	6.2	14.22	16.66	.438	.438	11.00	.556	7.41
18X10X .438/.556T	49.10	76.6	121.6	808.6	7.3	11.6	7.3	14.44	18.66	.438	.438	10.00	.556	8.28
16X11X .438/.719T	50.69	66.8	121.7	732.0	6.5	11.0	6.0	14.91	16.72	.438	.438	11.00	.719	7.43
18X11X .438/.556T	51.31	77.5	130.4	919.3	7.3	11.9	7.0	15.09	18.66	.438	.438	11.00	.556	8.28
21X 8X .500/.625T	52.70	96.4	125.3	1192.3	8.2	12.4	9.5	15.50	21.63	.500	.500	8.00	.625	10.94
18X12X .438/.556T	53.55	78.3	139.2	947.7	7.2	12.1	6.8	15.75	18.66	.438	.438	12.00	.556	8.28
21X 8X .500/.680T	54.40	98.0	132.8	1236.7	8.2	12.6	9.3	16.00	21.69	.500	.500	8.00	.680	10.97
21X 8X .500/.750T	56.10	99.4	140.0	1278.8	8.2	12.9	9.1	16.50	21.75	.500	.500	8.00	.750	11.00
21X10X .500/.625T	56.95	99.6	144.7	1290.8	8.2	13.0	8.9	16.75	21.63	.500	.500	10.00	.625	10.94
21X 9X .500/.750T	58.65	101.0	151.8	1334.6	8.2	13.2	8.8	17.25	21.75	.500	.500	9.00	.750	11.00

0.2500 - 1/4 in.



.250 IN. PLATE (AREA= 2.38 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
		WT/LT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK										
21X11X	.500/ .625T	53.09	100.9	154.6	1336.0	8.2	13.2	8.6	17.38	21.63	.500	11.00	.625										
21X 8X	.500/ .875T	59.50	101.9	154.6	1359.6	8.3	13.3	8.8	17.50	21.88	.500	8.00	.875										
21X10X	.500/ .750T	61.20	102.5	163.3	1385.5	8.2	13.5	8.5	18.00	21.75	.500	10.00	.750										
21X11X	.500/ .688T	61.40	102.4	164.7	1395.8	8.2	13.5	8.4	18.06	21.69	.500	11.00	.688										
21X13X	.500/ .688T	66.10	104.7	186.1	1470.0	8.2	14.0	7.9	19.44	21.69	.500	13.00	.688										
21X12X	.500/ .750T	66.30	105.0	186.4	1477.6	8.2	14.1	7.9	19.50	21.75	.500	12.00	.750										
21X11X	.500/ .875T	68.44	106.3	194.5	1521.2	8.2	14.3	7.8	20.13	21.88	.500	11.00	.875										
24X 9X	.625/ .750T	73.35	136.3	188.8	1979.0	9.1	14.5	10.5	21.75	24.75	.625	9.00	.750										
24X10X	.625/ .750T	76.50	138.5	201.9	2053.7	9.1	14.8	10.2	22.50	24.75	.625	10.00	.750										
24X11X	.625/ .750T	79.05	140.5	214.7	2123.2	9.1	15.1	9.9	23.25	24.75	.625	11.00	.750										
24X10X	.625/ .875T	80.75	142.2	221.8	2177.9	9.1	15.3	9.8	23.75	24.88	.625	10.00	.875										
24X 9X	.625/1.125T	85.44	146.3	242.4	2315.8	9.2	15.8	9.6	25.13	25.13	.625	9.00	1.125										
24X13X	.625/ .875T	89.63	147.7	266.4	2387.6	9.1	16.2	9.0	26.38	24.88	.625	13.00	.875										
24X14X	.625/ .875T	92.55	149.2	281.2	2449.5	9.1	16.4	8.7	27.25	24.88	.625	14.00	.875										
24X11X	.625/1.125T	93.09	150.5	280.0	2484.2	9.1	16.5	8.9	27.38	25.13	.625	11.00	1.125										
24X12X	.625/1.125T	96.90	152.2	298.6	2559.1	9.1	16.8	8.6	28.50	25.13	.625	12.00	1.125										
27X 9X	.688/1.125T	97.55	184.0	286.9	3181.9	10.1	17.3	11.1	28.69	28.13	.688	9.00	1.125										
24X16X	.625/ .975T	98.60	151.8	310.5	2562.3	9.0	16.9	8.3	29.00	24.88	.625	16.00	.875										
27X12X	.688/ .875T	98.80	183.9	297.3	3196.0	10.1	17.4	10.8	29.06	27.88	.688	12.00	.875										
27X13X	.688/ .875T	101.80	186.1	313.9	3296.6	10.1	17.7	10.5	29.94	27.88	.688	13.00	.875										
27X11X	.688/1.125T	105.20	189.6	329.2	3415.1	10.1	18.0	10.4	30.94	28.13	.688	11.00	1.125										
30X13X	.750/ .875T	115.19	230.6	366.1	4403.9	11.0	19.1	12.0	33.88	30.88	.750	13.00	.875										
27X14X	.688/1.125T	116.65	196.3	331.3	3709.5	10.1	18.9	9.5	34.31	28.13	.688	14.00	1.125										
30X11X	.750/1.125T	118.59	234.9	393.2	4570.1	11.1	19.5	11.9	34.88	31.13	.750	11.00	1.125										
27X15X	.688/1.125T	120.50	198.0	412.4	3797.0	10.0	19.2	9.2	35.44	28.13	.688	15.00	1.125										
30X12X	.750/1.125T	122.40	238.1	406.6	4711.7	11.1	19.8	11.6	36.00	31.13	.750	12.00	1.125										
30X16X	.750/ .875T	124.10	238.0	420.8	4732.7	11.0	19.9	11.2	36.50	30.88	.750	16.00	.875										
27X16X	.688/1.125T	124.30	199.7	432.7	3878.0	10.0	19.4	9.0	36.56	28.13	.688	16.00	1.125										
30X10X	.875/1.375T	136.00	263.5	423.0	5135.1	11.0	19.5	12.1	40.00	31.13	.750	14.00	1.125										
33X12X	.875/1.125T	144.03	304.2	478.6	6395.0	12.0	21.0	13.4	42.38	34.13	.875	12.00	1.125										
33X10X	.875/1.375T	144.94	306.8	479.6	6479.4	12.0	21.1	13.5	42.63	34.38	.875	10.00	1.375										
36X10X	.875/1.125T	145.35	339.9	481.9	7450.3	12.8	21.9	15.5	42.75	37.13	.875	10.00	1.125										
33X11X	.875/1.375T	149.60	311.5	510.5	6699.3	12.0	21.5	13.1	44.00	34.38	.875	11.00	1.375										
36X14X	.875/1.125T	151.74	311.9	528.9	6745.4	12.0	21.6	12.8	44.63	34.13	.875	14.00	1.125										
36X10X	.875/1.500T	158.10	358.8	567.4	8297.7	13.0	23.1	14.6	46.50	37.50	.875	10.00	1.500										
36X14X	.875/1.375T	172.55	372.5	672.3	9020.1	13.0	24.2	13.4	50.75	37.38	.875	14.00	1.375										
36X15X	.875/1.500T	183.60	382.5	747.2	9550.7	13.0	25.0	12.8	54.00	37.50	.875	15.00	1.500										

0.2500 - 1/4 in.



281 IN. PLATE (AREA= 3.01 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL						INERTIA	WEB THICK	WIDTH	
3X 2X .125/.188T	2.55	7.0	1.5	1.1	.6	2.8	.75	3.19	.125	2.00	.188	.43
4X 2X .125/.188T	2.99	9.5	2.2	1.4	.8	3.6	.88	4.19	.125	2.00	.188	.56
3X 3X .125/.188T	3.20	7.6	2.1	1.2	.8	2.7	.94	3.19	.125	3.00	.188	.43
5X 2X .125/.188T	3.40	12.2	2.9	1.8	1.0	4.4	1.00	5.19	.125	2.00	.188	.68
4X 3X .125/.188T	3.60	10.2	2.9	1.6	1.0	3.5	1.06	4.19	.125	3.00	.188	.56
5X 3X .125/.188T	4.05	13.0	3.8	2.0	1.2	4.2	1.19	5.19	.125	3.00	.188	.68
4X 2X .188/.313T	4.69	10.5	3.4	1.6	1.1	3.5	1.38	4.31	.188	2.00	.313	.86
3X 3X .188/.313T	5.10	8.3	3.4	1.4	1.0	2.6	1.50	3.31	.188	3.00	.313	.68
5X 2X .188/.313T	5.30	13.3	4.5	2.0	1.4	4.2	1.56	5.31	.188	2.00	.313	1.05
6X 2X .188/.313T	5.95	16.1	5.7	2.4	1.7	4.9	1.75	6.31	.188	2.00	.313	1.24
7X 2X .188/.250T	6.15	18.3	6.1	2.7	1.9	5.6	1.81	7.25	.188	2.00	.250	1.42
5X 3X .188/.313T	6.39	14.1	6.0	2.2	1.7	3.9	1.88	5.31	.188	3.00	.313	1.05
5X 4X .188/.250T	6.60	14.1	6.3	2.2	1.7	3.8	1.94	5.25	.188	4.00	.250	1.04
7X 3X .188/.250T	7.00	19.3	7.8	2.9	2.2	5.4	2.06	7.25	.188	3.00	.250	1.42
6X 4X .188/.250T	7.24	17.1	7.8	2.6	2.1	4.5	2.13	6.25	.188	4.00	.250	1.23
5X 4X .188/.313T	7.45	14.6	7.5	2.3	1.9	3.7	2.19	5.31	.188	4.00	.313	1.05
7X 3X .188/.313T	7.65	20.0	9.0	3.0	2.3	5.2	2.25	7.31	.188	3.00	.313	1.43
7X 4X .188/.250T	7.85	20.1	9.4	3.0	2.4	5.1	2.31	7.25	.188	4.00	.250	1.42
6X 4X .188/.313T	8.09	17.7	9.2	2.7	2.3	4.3	2.38	6.31	.188	4.00	.313	1.24
7X 4X .188/.313T	8.70	20.7	11.0	3.1	2.6	5.0	2.56	7.31	.188	4.00	.313	1.43
6X 5X .188/.313T	9.15	18.1	11.0	2.8	2.5	4.1	2.69	6.31	.188	5.00	.313	1.24
6X 3X .250/.438T	9.55	18.1	9.9	2.7	2.4	4.3	2.81	6.44	.250	3.00	.438	1.68
7X 5X .188/.313T	9.79	21.3	13.1	3.2	2.9	4.7	2.88	7.31	.188	5.00	.313	1.43
6X 4X .250/.375T	10.20	18.3	11.0	2.8	2.5	4.2	3.00	6.38	.250	4.00	.375	1.67
7X 3X .250/.438T	10.40	21.2	11.9	3.1	2.8	4.9	3.06	7.44	.250	3.00	.438	1.93
6X 3X .250/.375T	10.64	23.9	12.8	3.4	2.8	5.6	3.13	8.38	.250	3.00	.375	2.17
9X 3X .250/.313T	10.85	26.4	13.4	3.7	3.2	6.4	3.19	9.31	.250	3.00	.313	2.40
8X 4X .250/.313T	11.05	24.2	13.8	3.5	3.1	5.5	3.25	8.31	.250	4.00	.313	2.15
8X 3X .250/.438T	11.25	24.5	14.1	3.5	3.2	5.5	3.31	8.44	.250	3.00	.438	2.18
9X 3X .250/.375T	11.49	27.1	14.9	3.8	3.4	6.2	3.38	9.38	.250	3.00	.375	2.42
10X 3X .250/.313T	11.70	29.7	15.5	4.1	3.6	7.0	3.44	10.31	.250	3.00	.313	2.65
8X 4X .250/.375T	11.90	24.8	15.5	3.6	3.3	5.3	3.50	8.38	.250	4.00	.375	2.17
9X 3X .250/.438T	12.10	27.8	16.3	3.9	3.6	6.1	3.56	9.44	.250	3.00	.438	2.43
10X 3X .250/.375T	12.34	30.4	17.1	4.2	3.8	6.8	3.63	10.38	.250	3.00	.375	2.67
10X 4X .250/.313T	12.75	30.8	18.3	4.2	3.9	6.6	3.75	10.31	.250	4.00	.313	2.65
9X 5X .250/.313T	12.95	28.2	18.5	4.0	3.8	5.8	3.81	9.31	.250	5.00	.313	2.40
8X 5X .250/.375T	13.19	25.5	18.3	3.7	3.6	5.0	3.88	8.38	.250	5.00	.375	2.17
10X 4X .250/.375T	13.60	31.6	20.5	4.3	4.2	6.5	4.00	10.38	.250	4.00	.375	2.67
10X 5X .250/.313T	13.80	31.7	21.1	4.4	4.2	6.4	4.06	10.31	.250	5.00	.313	2.65
9X 5X .250/.375T	14.04	28.9	21.0	4.1	4.1	5.6	4.13	9.38	.250	5.00	.375	2.42
8X 5X .250/.438T	14.25	26.0	20.4	3.7	3.8	4.9	4.19	8.44	.250	5.00	.438	2.18
10X 4X .250/.438T	14.45	32.3	22.6	4.4	4.4	6.3	4.25	10.44	.250	4.00	.375	2.68
10X 5X .250/.375T	14.89	32.5	23.8	4.5	4.5	6.2	4.38	10.38	.250	5.00	.375	2.67
9X 5X .250/.438T	15.10	29.6	23.4	4.1	4.3	5.4	4.44	9.44	.250	5.00	.438	2.43
9X 6X .250/.375T	15.30	29.5	23.9	4.1	4.3	5.3	4.50	9.38	.250	6.00	.375	2.42

0.2813 - 9/32 in.

•201 IN. PLATE (AREA= 3.01 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	FLANGE THICK	
8X 6X .250/.438T	15.74	26.5	26.5	108.7	3.8	4.1	4.6	4.63	8.44	.250	6.00	.438	2.18
10X 5X .250/.438T	15.95	33.2	26.5	157.9	4.5	4.8	6.0	4.69	10.44	.250	5.00	.438	2.68
10X 6X .250/.375T	16.15	33.2	27.1	159.1	4.5	4.8	5.9	4.75	10.38	.250	6.00	.375	2.67
8X 7X .250/.438T	17.20	26.9	26.6	116.7	3.8	4.3	4.4	5.06	8.44	.250	7.00	.438	2.42
10X 7X .250/.375T	17.44	33.7	30.5	170.7	4.6	5.1	5.6	5.13	10.38	.250	7.00	.375	2.67
9X 7X .250/.438T	18.05	30.6	30.3	148.1	4.2	4.8	4.9	5.31	9.44	.250	7.00	.438	2.43
10X 4X .313/.563T	18.23	34.4	27.9	166.8	4.5	4.9	6.0	5.38	10.56	.313	4.00	.563	3.39
12X 4X .313/.406T	18.23	40.3	28.7	212.8	5.0	5.3	7.4	5.38	12.41	.313	4.00	.406	3.97
8X 8X .250/.438T	18.70	27.2	29.7	123.9	3.8	4.6	4.2	5.50	8.44	.250	8.00	.438	2.18
10X 7X .250/.438T	18.90	34.4	34.1	183.6	4.6	5.3	5.4	5.56	10.44	.250	7.00	.438	2.68
12X 4X .313/.469T	19.14	41.1	31.2	226.1	5.1	5.5	7.3	5.63	12.47	.313	4.00	.469	3.99
9X 8X .250/.438T	19.55	31.0	33.8	157.1	4.2	5.1	4.6	5.75	9.44	.250	8.00	.438	2.43
12X 5X .313/.406T	19.65	41.4	32.9	232.7	5.1	5.6	7.1	5.78	12.41	.313	5.00	.406	3.97
12X 4X .313/.531T	19.99	41.9	33.6	239.1	5.2	5.7	7.1	5.88	12.53	.313	4.00	.531	4.01
10X 8X .250/.438T	20.40	34.8	37.9	194.7	4.6	5.6	5.1	6.00	10.44	.250	8.00	.438	2.68
12X 5X .313/.469T	20.71	42.3	36.0	248.0	5.2	5.9	6.9	6.09	12.47	.313	5.00	.469	3.99
12X 6X .313/.406T	21.05	42.4	37.0	250.9	5.2	5.9	6.8	6.19	12.41	.313	6.00	.406	3.97
12X 5X .313/.531T	21.79	43.1	39.1	262.5	5.3	6.1	6.7	6.41	12.53	.313	5.00	.531	4.01
12X 6X .313/.469T	22.30	43.3	40.7	267.6	5.3	6.2	6.6	6.56	12.47	.313	6.00	.469	3.99
12X 7X .313/.406T	22.41	43.2	41.3	268.0	5.3	6.2	6.5	6.59	12.41	.313	7.00	.406	3.97
12X 6X .313/.531T	23.60	44.0	44.4	293.4	5.3	6.4	6.4	6.94	12.53	.313	6.00	.531	4.01
12X 7X .313/.469T	23.90	44.1	45.5	285.6	5.3	6.5	6.3	7.03	12.47	.313	7.00	.469	3.99
14X 4X .375/.469T	24.24	50.9	48.1	331.0	5.7	6.5	8.3	7.13	14.47	.375	4.00	.469	5.53
14X 4X .375/.531T	25.09	51.9	42.9	347.8	5.8	6.7	8.1	7.38	14.53	.375	4.00	.531	5.55
12X 7X .313/.531T	25.40	44.8	49.8	302.3	5.4	6.7	6.1	7.47	12.53	.313	7.00	.531	4.01
12X 8X .313/.469T	25.50	44.7	50.3	302.0	5.4	6.8	6.0	7.50	12.47	.313	8.00	.469	3.99
14X 4X .375/.594T	25.94	52.8	45.6	363.9	5.8	6.9	8.0	7.63	14.59	.375	4.00	.594	5.58
12X 5X .375/.656T	26.45	46.0	46.3	298.5	5.3	6.5	6.4	7.78	12.66	.375	5.00	.656	4.85
14X 4X .375/.656T	26.79	53.7	48.3	379.6	5.9	7.1	7.9	7.88	14.66	.375	4.00	.656	5.60
14X 5X .375/.531T	26.99	53.5	49.0	378.9	5.9	7.1	7.7	7.91	14.53	.375	5.00	.531	5.55
12X 8X .313/.531T	27.20	45.5	55.2	319.3	5.4	7.0	5.8	8.00	12.53	.313	8.00	.531	4.01
14X 6X .375/.531T	28.70	54.8	55.2	407.4	6.0	7.4	7.4	8.44	14.53	.375	6.00	.531	5.55
14X 5X .375/.656T	29.00	55.3	55.8	414.9	6.0	7.5	7.4	8.53	14.66	.375	5.00	.656	5.60
14X 7X .375/.469T	29.00	54.9	56.4	410.3	6.0	7.5	7.3	8.53	14.47	.375	7.00	.469	5.53
12X 9X .313/.531T	29.00	46.0	60.5	334.7	5.4	7.3	5.5	8.53	12.53	.313	9.00	.531	4.01
14X 6X .375/.594T	29.95	55.7	55.3	427.2	6.0	7.7	7.2	8.81	14.59	.375	6.00	.594	5.58
14X 7X .375/.531T	30.50	55.9	61.2	432.9	6.0	7.7	7.1	8.97	14.53	.375	7.00	.531	5.55
14X 8X .375/.469T	30.60	55.8	61.8	432.6	6.0	7.7	7.0	9.00	14.47	.375	8.00	.469	5.53
12X 10X .313/.531T	30.80	46.5	65.7	348.7	5.4	7.5	5.3	9.06	12.53	.313	10.00	.531	4.01
14X 6X .375/.656T	31.25	56.6	63.2	446.2	6.0	7.9	7.1	9.19	14.66	.375	6.00	.656	5.60
14X 7X .375/.594T	31.99	56.8	66.0	454.0	6.0	8.0	6.9	9.41	14.59	.375	7.00	.594	5.58
14X 8X .375/.531T	32.30	56.8	67.3	456.4	6.0	8.0	6.8	9.50	14.53	.375	8.00	.531	5.55
16X 5X .438/.531T	32.84	56.5	68.6	529.6	6.5	8.1	8.7	9.66	16.53	.438	5.00	.531	7.36
16X 5X .438/.594T	33.30	66.7	64.5	553.0	6.5	8.3	8.6	9.97	16.59	.438	5.00	.594	7.39

0.2813 - 9/32 in.



201 IN. PLATE (AREA= 3.01 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
14X 8X .375/.594T	34.00	57.7	72.9	479.0	6.1	8.3	6.6	10.00	14.59	.375	8.00	.594	5.58
14X 9X .375/.531T	34.10	57.6	73.4	478.0	6.1	8.3	6.5	10.03	14.53	.375	9.00	.531	5.55
16X 6X .438/.531T	34.65	67.2	87.6	566.5	6.6	8.4	8.4	10.19	16.53	.438	6.00	.531	7.36
16X 5X .438/.656T	34.95	67.8	88.2	575.8	6.6	8.5	8.4	10.28	16.66	.438	5.00	.656	7.42
12X10X .375/.594T	35.50	49.0	72.6	376.3	5.3	7.7	5.2	10.44	12.59	.375	10.00	.594	4.83
14X 8X .375/.656T	35.70	58.5	78.0	499.6	6.1	8.5	6.4	10.50	14.66	.375	8.00	.656	5.60
16X 6X .438/.594T	35.90	68.4	72.1	532.2	6.6	8.7	8.2	10.56	16.59	.438	6.00	.594	7.39
14X10X .375/.531T	35.90	58.3	79.4	497.8	6.1	8.5	6.3	10.56	14.53	.375	10.00	.531	5.55
16X 5X .438/.719T	36.01	68.8	72.0	597.8	6.6	8.7	8.3	10.59	16.72	.438	5.00	.719	7.45
14X 9X .375/.594T	36.01	58.5	79.5	501.1	6.1	8.6	6.3	10.59	14.59	.375	9.00	.594	5.58
16X 6X .438/.656T	37.20	69.5	76.5	617.1	6.7	9.9	8.1	10.94	16.66	.438	6.00	.656	7.42
18X 6X .438/.531T	37.60	78.2	78.6	737.3	7.2	9.4	9.4	11.06	18.53	.438	6.00	.531	8.24
18X 5X .438/.656T	37.94	78.8	79.3	748.7	7.3	9.5	9.4	11.16	18.66	.438	5.00	.656	8.30
14X10X .375/.594T	38.05	59.1	96.2	521.7	6.1	8.8	6.1	11.19	14.59	.375	10.00	.594	5.58
16X 6X .438/.719T	38.45	70.5	81.0	641.0	6.7	9.1	7.9	11.31	16.72	.438	6.00	.719	7.45
18X 6X .438/.594T	38.90	79.6	83.7	769.9	7.3	9.7	9.2	11.44	18.59	.438	6.00	.594	8.27
18X 5X .438/.719T	39.00	80.0	83.5	776.1	7.3	9.7	9.3	11.47	18.72	.438	5.00	.719	8.32
16X 8X .438/.594T	39.95	71.1	87.1	660.4	6.7	9.3	7.6	11.75	16.59	.438	8.00	.594	7.39
16X 9X .438/.531T	40.05	71.0	87.8	659.8	6.7	9.3	7.5	11.78	16.53	.438	9.00	.531	7.36
14X11X .375/.594T	40.05	59.7	93.0	540.9	6.0	9.1	5.8	11.78	14.59	.375	11.00	.594	5.58
18X 7X .438/.594T	40.90	81.3	92.1	814.9	7.4	10.0	8.8	12.03	18.59	.438	7.00	.594	8.27
18X 8X .438/.531T	41.24	81.4	93.8	819.7	7.4	10.1	8.7	12.13	18.53	.438	6.00	.531	8.24
18X 6X .438/.719T	41.45	82.0	93.6	830.8	7.4	10.1	8.9	12.19	18.72	.438	6.00	.719	8.32
16X10X .438/.531T	41.85	71.9	94.7	687.2	6.7	9.6	7.3	12.31	16.53	.438	10.00	.531	7.36
16X 9X .438/.594T	41.96	72.2	94.7	690.8	6.7	9.6	7.3	12.34	16.59	.438	9.00	.594	7.39
18X 7X .438/.656T	42.40	81.7	96.9	839.8	7.4	10.3	8.7	12.47	18.66	.438	7.00	.656	8.30
14X11X .375/.656T	42.40	60.5	100.0	563.0	6.0	9.3	5.6	12.47	14.66	.375	11.00	.656	5.60
18X 9X .438/.531T	43.04	82.7	101.3	856.5	7.4	10.4	8.5	12.66	18.53	.438	9.00	.531	8.24
16X10X .438/.594T	44.00	73.1	102.3	719.2	6.7	9.8	7.0	12.94	16.59	.438	10.00	.594	7.39
18X 8X .438/.656T	44.64	84.1	107.1	892.2	7.4	10.6	8.3	13.13	18.66	.438	8.00	.656	8.30
16X11X .438/.594T	46.00	73.9	109.6	744.7	6.7	10.1	6.8	13.53	16.59	.438	11.00	.594	7.39
16X10X .438/.656T	46.10	74.1	109.5	749.1	6.7	10.1	6.8	13.56	16.66	.438	10.00	.656	7.42
18X 9X .438/.656T	46.85	85.4	116.4	932.7	7.5	10.9	8.0	13.78	18.66	.438	9.00	.656	8.30
18X10X .438/.594T	46.95	85.2	117.4	931.8	7.4	10.9	7.9	13.81	18.59	.438	10.00	.594	8.27
16X10X .438/.719T	48.25	75.1	117.1	777.8	6.7	10.4	6.6	14.19	16.72	.438	10.00	.719	7.45
16X11X .438/.656T	48.35	75.0	117.8	776.0	6.7	10.4	6.6	14.22	16.66	.438	11.00	.656	7.42
19X10X .438/.656T	49.10	86.5	125.5	969.9	7.5	11.2	7.7	14.44	18.66	.438	10.00	.656	8.30
16X11X .438/.719T	50.63	75.9	125.7	804.5	6.7	10.6	6.4	14.91	16.72	.438	11.00	.719	7.45
21X 8X .500/.625T	51.31	87.5	134.6	1004.4	7.4	11.5	7.5	15.09	21.63	.500	8.00	.625	10.96
18X12X .438/.656T	53.55	88.4	143.7	1036.4	7.4	11.7	7.2	15.75	18.66	.438	12.00	.656	8.30
21X 8X .500/.688T	54.40	108.9	137.0	1333.3	8.4	12.2	9.9	15.50	21.69	.500	8.00	.688	10.99
21X 8X .500/.750T	56.10	110.5	144.4	1379.2	8.4	12.5	9.7	16.00	21.75	.500	8.00	.750	11.02
21X10X .500/.625T	56.95	110.7	149.2	1392.8	8.4	12.6	9.3	16.75	21.63	.500	10.00	.625	10.96
21X 9X .500/.750T	58.65	112.3	156.6	1440.6	8.4	12.8	9.2	17.25	21.75	.500	9.00	.750	11.02

0.2813 - 9/32 in.



.281 IN. PLATE (AREA= 3.81 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
		ZPL	ZFL							WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	112.2	159.4	8.4	12.9	9.1	17.38	21.63	.500	11.00	.625	10.96
21X 8X .500/.875T	59.58	113.3	159.5	8.5	13.0	9.2	17.50	21.88	.500	8.00	.875	11.88
21X10X .500/.750T	61.28	113.9	169.3	8.4	13.1	8.9	18.00	21.75	.500	10.00	.750	11.82
21X11X .500/.688T	61.40	113.8	169.8	8.4	13.2	8.8	18.06	21.69	.500	11.00	.688	10.99
21X13X .500/.688T	66.10	116.3	191.7	8.4	13.7	8.3	19.44	21.69	.500	13.00	.688	10.99
21X12X .500/.750T	66.30	116.6	192.1	8.4	13.7	8.3	19.50	21.75	.500	12.00	.750	11.88
21X11X .500/.875T	68.44	118.0	208.4	8.4	13.9	8.2	20.13	21.68	.500	11.00	.875	11.88
24X 9X .625/.750T	73.95	148.6	194.3	9.2	14.2	10.9	21.75	24.75	.625	9.00	.750	15.64
24X10X .625/.750T	76.50	151.0	207.7	9.3	14.5	10.5	22.50	24.75	.625	10.00	.750	15.64
24X11X .625/.750T	79.05	153.1	220.7	9.3	14.8	10.3	23.25	24.75	.625	11.00	.750	15.64
24X10X .625/.875T	80.75	155.8	228.1	9.3	15.0	10.2	23.75	24.88	.625	10.00	.875	15.73
24X 9X .625/1.125T	85.44	159.3	249.2	9.4	15.5	9.9	25.13	25.13	.625	9.00	1.125	15.88
24X13X .625/.875T	89.69	160.8	273.7	9.3	15.9	9.3	26.38	24.88	.625	13.00	.875	15.73
24X14X .625/.875T	92.65	162.3	288.9	9.3	16.1	9.1	27.25	24.88	.625	14.00	.875	15.73
24X11X .625/1.125T	93.09	163.7	287.8	9.3	16.2	9.2	27.38	25.13	.625	11.00	1.125	15.88
24X12X .625/1.125T	96.90	165.6	306.9	9.3	16.5	8.9	28.50	25.13	.625	12.00	1.125	15.88
27X 9X .688/1.125T	97.55	198.3	298.4	10.3	17.0	11.4	28.69	28.13	.688	9.00	1.125	19.55
24X16X .625/.875T	98.60	165.1	318.9	9.2	16.6	8.6	29.00	24.88	.625	16.00	.875	15.73
27X12X .688/.875T	98.80	198.1	304.9	10.3	17.1	11.1	29.06	27.88	.688	12.00	.875	19.37
27X13X .688/.875T	101.80	200.5	321.9	10.3	17.4	10.8	29.94	27.88	.688	13.00	.875	19.37
27X11X .688/1.125T	105.20	204.2	337.6	10.3	17.7	10.7	30.34	28.13	.688	11.00	1.125	19.55
30X13X .750/.875T	115.19	246.2	376.6	11.2	18.8	12.4	33.88	30.88	.750	13.00	.875	23.37
27X14X .688/1.125T	116.65	211.2	401.1	10.3	18.6	9.8	34.31	28.13	.688	14.00	1.125	19.55
30X11X .750/1.125T	118.59	250.7	392.2	11.3	19.2	12.2	34.88	31.13	.750	11.00	1.125	23.56
27X15X .688/1.125T	120.50	213.0	422.7	10.2	18.9	9.5	35.44	28.13	.688	15.00	1.125	19.55
30X12X .750/1.125T	122.40	254.0	418.0	11.3	19.5	11.9	36.00	31.13	.750	12.00	1.125	23.56
30X16X .750/.875T	124.10	254.0	430.5	11.2	19.6	11.6	36.50	30.88	.750	16.00	.875	23.37
27X16X .688/1.125T	124.30	214.8	443.4	10.2	19.1	9.3	36.56	28.13	.688	16.00	1.125	19.55
30X14X .750/1.125T	130.05	259.8	463.0	11.3	20.1	11.3	38.25	31.13	.750	14.00	1.125	23.56
30X10X .875/1.375T	136.00	279.2	432.2	11.2	20.2	12.4	40.00	31.38	.875	10.00	1.375	27.70
33X12X .875/1.125T	144.09	321.3	488.5	12.1	20.8	13.7	42.38	34.13	.875	12.00	1.125	30.11
33X10X .875/1.375T	144.94	323.9	489.5	12.2	20.9	13.8	42.63	34.38	.875	10.00	1.375	30.33
36X10X .875/1.125T	145.35	357.9	491.6	13.0	21.6	15.8	42.75	37.13	.875	10.00	1.125	32.73
33X11X .875/1.375T	149.60	328.8	520.9	12.2	21.2	13.4	44.00	34.38	.875	11.00	1.375	30.33
36X14X .875/1.125T	151.74	329.2	535.5	12.2	21.4	13.0	44.63	34.13	.875	14.00	1.125	38.11
36X10X .875/1.500T	158.10	377.5	578.4	13.2	22.9	14.9	46.50	37.50	.875	10.00	1.500	33.06
36X14X .875/1.375T	172.55	391.7	695.0	13.2	24.0	13.7	50.75	37.38	.875	14.00	1.375	32.95
36X15X .875/1.500T	183.60	402.0	761.1	13.2	24.7	13.1	54.00	37.50	.875	15.00	1.500	33.06

0.2813 - 9/32 in.

0.313 IN. PLATE (AREA= 3.71 SQ.IN.)

NOMINAL SIZE		WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	DIMENSIONS		FLANGE	SHEAR AREA
3X 2X	4X 2X		ZPL	ZFL							WEB THICK	WIDTH		
3X 2X	.125/.188T	2.55	9.1	1.6	4.6	1.0	.6	2.9	.75	3.19	.125	2.00	.188	.44
4X 2X	.125/.188T	2.99	11.2	2.2	8.3	1.3	.7	3.8	.88	4.19	.125	2.00	.188	.56
3X 3X	.125/.188T	3.20	8.9	2.2	6.1	1.1	.7	2.8	.94	3.19	.125	3.00	.188	.44
3X 3X	.125/.188T	3.40	14.4	2.9	13.3	1.7	.9	4.6	1.00	5.19	.125	2.00	.188	.69
4X 3X	.125/.188T	3.60	12.0	2.9	10.6	1.5	.9	3.6	1.06	4.19	.125	3.00	.188	.56
5X 3X	.125/.188T	4.05	15.4	3.8	16.9	1.9	1.1	4.4	1.19	5.19	.125	3.00	.188	.69
4X 2X	.188/.313T	4.63	12.4	3.5	12.5	1.6	1.0	3.6	1.38	4.31	.188	2.00	.313	.87
3X 3X	.188/.313T	5.10	9.9	3.4	9.2	1.3	.9	2.7	1.50	3.31	.188	3.00	.313	.68
5X 2X	.188/.313T	5.30	15.8	4.5	19.8	1.9	1.3	4.4	1.56	5.31	.188	2.00	.313	1.06
6X 2X	.188/.313T	5.95	19.1	5.7	29.3	2.3	1.5	5.1	1.75	6.31	.188	2.00	.313	1.25
7X 2X	.188/.250T	6.15	21.7	6.2	36.5	2.6	1.7	5.9	1.81	7.25	.188	2.00	.250	1.42
5X 3X	.188/.313T	6.39	16.8	6.1	25.2	2.1	1.5	4.1	1.88	5.31	.188	3.00	.313	1.06
5X 4X	.188/.250T	6.60	16.8	6.4	25.8	2.1	1.5	4.0	1.94	5.25	.188	4.00	.250	1.05
7X 3X	.188/.250T	7.00	23.0	7.9	44.4	2.8	1.9	5.6	2.06	7.25	.188	3.00	.250	1.42
6X 4X	.188/.250T	7.24	20.4	8.0	37.6	2.5	1.8	4.7	2.13	6.25	.188	4.00	.250	1.23
5X 4X	.188/.313T	7.45	17.4	7.6	29.8	2.2	1.7	3.9	2.19	5.31	.188	4.00	.313	1.06
7X 3X	.188/.313T	7.65	23.8	9.1	50.3	2.9	2.1	5.5	2.25	7.31	.188	3.00	.313	1.43
7X 4X	.188/.250T	7.85	23.9	9.6	51.7	2.9	2.2	5.4	2.31	7.25	.188	4.00	.250	1.42
6X 4X	.188/.313T	8.09	21.1	9.4	43.0	2.7	2.0	4.6	2.38	6.31	.188	4.00	.313	1.25
7X 4X	.188/.313T	8.70	24.7	11.2	58.7	3.1	2.4	5.2	2.56	7.31	.188	4.00	.313	1.43
6X 5X	.188/.313T	9.15	21.7	11.2	48.9	2.8	2.3	4.4	2.69	6.31	.188	5.00	.313	1.25
6X 3X	.250/.438T	9.55	21.5	10.1	46.5	2.7	2.2	4.6	2.81	6.44	.250	3.00	.438	1.69
7X 5X	.188/.313T	9.79	25.4	13.3	66.6	3.2	2.6	5.0	2.88	7.31	.188	5.00	.313	1.43
6X 4X	.250/.375T	10.20	21.7	11.2	49.5	2.7	2.3	4.4	3.00	6.38	.250	4.00	.375	1.67
7X 3X	.250/.438T	10.40	25.2	12.2	63.7	3.1	2.5	5.2	3.06	7.44	.250	3.00	.438	1.94
8X 3X	.250/.375T	10.64	28.3	13.1	77.8	3.4	2.7	5.9	3.13	8.38	.250	3.00	.375	2.17
9X 3X	.250/.313T	10.85	31.2	13.7	91.8	3.6	2.9	6.7	3.19	9.31	.250	3.00	.313	2.41
8X 4X	.250/.313T	11.05	28.6	14.1	81.4	3.4	2.8	5.8	3.25	8.31	.250	4.00	.313	2.16
8X 3X	.250/.438T	11.25	29.0	14.4	84.2	3.5	2.9	5.8	3.31	8.44	.250	3.00	.438	2.19
9X 3X	.250/.375T	11.49	32.1	15.2	100.1	3.8	3.1	6.6	3.38	9.38	.250	3.00	.375	2.42
10X 3X	.250/.313T	11.70	35.0	15.9	116.0	4.0	3.3	7.3	3.44	10.31	.250	3.00	.313	2.66
8X 4X	.250/.375T	11.90	29.4	15.8	89.4	3.5	3.0	5.7	3.50	8.38	.250	4.00	.375	2.17
9X 3X	.250/.438T	12.10	32.9	16.7	100.1	3.9	3.3	6.5	3.56	9.44	.250	3.00	.438	2.44
10X 3X	.250/.375T	12.34	35.9	17.5	125.7	4.1	3.5	7.2	3.63	10.38	.250	3.00	.375	2.67
10X 4X	.250/.313T	12.75	36.3	18.7	131.2	4.2	3.6	7.0	3.75	10.31	.250	4.00	.313	2.66
9X 5X	.250/.313T	12.95	33.4	18.9	116.3	3.9	3.5	6.1	3.81	9.31	.250	5.00	.313	2.41
8X 5X	.250/.375T	13.13	30.2	18.7	100.3	3.6	3.3	5.4	3.88	8.38	.250	5.00	.375	2.17
10X 4X	.250/.375T	13.60	37.3	20.9	143.3	4.3	3.8	6.8	4.00	10.38	.250	4.00	.375	2.66
10X 5X	.250/.313T	13.80	37.4	21.5	145.2	4.3	3.9	6.7	4.06	10.31	.250	5.00	.313	2.66
9X 5X	.250/.438T	14.04	34.2	21.4	127.7	4.0	3.7	6.0	4.13	9.38	.250	5.00	.438	2.42
8X 5X	.250/.438T	14.25	30.9	20.8	100.8	3.7	3.5	5.2	4.19	8.44	.250	5.00	.438	2.19
10X 4X	.250/.438T	14.45	38.1	23.1	154.7	4.4	4.1	6.7	4.25	10.44	.250	4.00	.438	2.69
10X 5X	.250/.375T	14.89	38.3	24.3	159.0	4.4	4.1	6.5	4.38	10.38	.250	5.00	.375	2.67
9X 5X	.250/.438T	15.10	35.0	23.9	138.6	4.1	4.0	5.8	4.44	9.44	.250	5.00	.438	2.44
9X 6X	.250/.375T	15.30	35.0	24.5	139.5	4.1	4.0	5.7	4.50	9.38	.250	6.00	.375	2.42

0.3125 - 5/16 in.



.313 IN. PLATE (AREA= 3.71 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	VP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL						WEB THICK	FLANGE WIDTH THICK	
8X 6X .250/.430T	15.74	31.5	24.0	3.0	3.0	5.0	4.63	8.44	.250	6.00	.438
10X 5X .250/.430T	15.95	39.2	27.1	4.5	4.4	6.4	4.69	10.44	.250	5.00	.438
10X 6X .250/.375T	16.15	39.2	27.5	4.5	4.4	6.3	4.75	10.38	.250	6.00	.375
9X 7X .250/.375T	16.59	35.5	27.5	4.2	4.2	5.5	4.88	9.38	.250	7.00	.375
8X 7X .250/.430T	17.20	31.9	27.2	3.8	4.0	4.7	5.06	8.44	.250	7.00	.438
10X 7X .250/.375T	17.44	39.8	31.1	4.6	4.7	6.0	5.13	10.38	.250	7.00	.375
9X 7X .250/.430T	18.05	36.2	31.0	4.3	4.5	5.3	5.31	9.44	.250	7.00	.438
10X 4X .313/.563T	18.29	40.3	28.6	4.5	4.5	6.4	5.38	10.56	.313	4.00	.563
12X 4X .313/.406T	18.29	46.9	29.5	5.0	4.9	7.8	5.38	12.41	.313	4.00	.406
8X 8X .250/.430T	18.70	32.3	30.3	3.9	4.2	4.5	5.50	8.44	.250	7.00	.438
10X 7X .250/.430T	18.90	40.6	34.9	4.7	5.0	5.8	5.56	10.44	.250	7.00	.438
12X 4X .313/.469T	19.14	47.9	32.0	5.1	7.7	7.7	5.63	12.47	.313	4.00	.469
9X 8X .250/.430T	19.55	36.7	34.5	4.3	4.7	5.0	5.75	9.44	.250	8.00	.438
12X 5X .313/.406T	19.65	48.3	33.8	5.2	5.2	7.5	5.78	12.41	.313	5.00	.406
12X 4X .313/.531T	19.99	48.8	34.6	5.2	5.3	7.5	5.88	12.53	.313	4.00	.531
10X 8X .250/.430T	20.40	41.1	38.8	4.7	5.2	5.5	6.00	10.44	.250	8.00	.438
12X 5X .313/.469T	20.71	49.3	36.9	5.2	5.5	7.3	6.09	12.47	.313	5.00	.469
12X 6X .313/.406T	21.05	49.4	38.0	5.3	5.5	7.2	6.19	12.41	.313	6.00	.406
12X 5X .313/.531T	21.79	50.2	40.1	5.3	5.7	7.1	6.41	12.53	.313	5.00	.531
12X 6X .313/.469T	22.30	50.4	41.8	5.3	5.8	7.0	6.56	12.47	.313	6.00	.469
12X 7X .313/.406T	22.41	50.4	42.3	5.3	5.8	6.9	6.59	12.41	.313	7.00	.406
12X 6X .313/.531T	23.60	51.3	45.6	5.4	6.0	6.8	6.94	12.53	.313	6.00	.531
12X 7X .313/.469T	23.90	51.4	46.7	5.4	6.1	6.7	7.03	12.47	.313	7.00	.469
14X 4X .375/.469T	24.24	56.6	41.3	5.7	6.1	8.7	7.13	14.47	.375	4.00	.469
14X 4X .375/.531T	25.09	59.7	44.2	5.8	6.3	8.5	7.38	14.53	.375	4.00	.531
12X 7X .313/.531T	25.40	52.2	51.1	5.4	6.4	6.5	7.47	12.53	.313	7.00	.531
12X 8X .313/.469T	25.50	52.1	51.6	5.4	6.4	6.4	7.50	12.47	.313	8.00	.469
14X 4X .375/.594T	25.94	60.8	47.0	5.9	6.5	8.4	7.63	14.59	.375	4.00	.594
12X 5X .375/.656T	26.45	53.1	47.6	5.3	6.1	6.8	7.78	12.66	.375	5.00	.656
14X 4X .375/.656T	26.73	61.7	49.7	6.0	6.7	8.3	7.88	14.66	.375	4.00	.656
14X 5X .375/.531T	26.99	61.5	50.5	6.0	6.7	8.2	7.91	14.53	.375	5.00	.531
12X 8X .313/.531T	27.20	53.0	56.6	5.5	6.6	6.2	8.00	12.53	.313	8.00	.531
14X 6X .375/.531T	28.70	63.0	56.8	6.0	7.0	7.8	8.44	14.53	.375	6.00	.531
14X 5X .375/.656T	29.00	63.5	57.4	6.1	7.1	7.9	8.53	14.66	.375	5.00	.656
14X 7X .375/.469T	29.00	63.1	58.0	6.0	7.1	7.7	8.53	14.47	.375	7.00	.469
12X 9X .313/.531T	29.00	53.6	62.1	36.9	3.5	6.0	8.53	12.53	.313	9.00	.531
14X 6X .375/.594T	29.95	64.1	61.0	46.5	6.1	7.3	8.81	14.59	.375	6.00	.594
14X 7X .375/.531T	30.50	64.3	63.0	47.2	6.1	7.3	8.97	14.53	.375	7.00	.531
14X 8X .375/.469T	30.60	64.2	63.5	47.1	6.1	7.4	9.00	14.47	.375	8.00	.469
12X 10X .313/.531T	30.80	54.1	67.5	38.5	5.5	7.1	9.06	12.53	.313	10.00	.531
14X 6X .375/.656T	31.25	65.0	65.1	48.7	6.1	7.5	9.19	14.66	.375	6.00	.656
14X 7X .375/.594T	31.99	65.3	67.9	49.6	6.1	7.6	9.41	14.59	.375	7.00	.594
14X 8X .375/.531T	32.30	65.3	69.2	49.8	6.1	7.6	9.50	14.53	.375	8.00	.531
16X 5X .438/.531T	32.34	74.5	62.5	57.2	6.5	7.7	9.66	16.53	.438	5.00	.531
16X 5X .438/.594T	33.90	75.7	66.5	59.3	6.6	7.9	9.97	16.59	.438	5.00	.594

0.3125 - 5/16 in.



0.313 IN. PLATE (AREA = 3.71 SQ. IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	VF	DIMENSIONS			SHEAR AREA		
	WT/FT	ZPL	ZFL				INERTIA	DEPTH	WEB THICK		FLANGE THICK	
14X 8X .375/ .594T	34.00	66.3	74.9	528.3	6.2	7.9	7.0	10.00	14.59	.375	.594	5.59
14X 9X .375/ .531T	34.10	66.2	75.4	523.3	6.6	7.9	6.9	10.03	14.53	.375	.531	5.57
14X 6X .438/ .531T	34.65	76.3	69.6	613.3	6.6	8.0	8.8	10.13	16.53	.438	.531	7.38
14X 5X .438/ .656T	34.95	76.9	70.3	623.4	6.7	8.1	8.9	10.28	16.66	.438	.500	7.43
12X 10X .375/ .594T	35.50	56.6	74.6	415.3	5.4	7.3	5.6	10.44	12.59	.375	.594	4.84
14X 8X .375/ .656T	35.70	67.2	80.3	547.7	6.2	8.1	8.6	10.50	14.66	.375	.656	5.61
14X 6X .438/ .594T	35.90	77.6	74.3	641.7	6.7	8.3	8.6	10.56	16.59	.438	.594	7.40
14X 10X .375/ .531T	35.90	67.0	81.6	546.0	6.2	8.2	6.7	10.56	14.53	.375	.531	5.57
16X 5X .438/ .719T	36.01	78.0	74.2	647.7	6.7	8.3	8.7	10.59	16.72	.438	.500	7.46
14X 9X .375/ .594T	36.01	67.2	91.8	549.6	6.2	8.2	6.7	10.59	14.59	.375	.594	5.59
16X 6X .438/ .656T	37.20	78.9	78.9	669.2	6.8	8.5	8.5	10.94	16.66	.438	.600	7.43
16X 6X .438/ .531T	37.60	88.3	91.0	796.1	7.3	9.0	9.8	11.06	18.53	.438	.531	8.25
18X 5X .438/ .656T	37.94	89.0	81.8	808.5	7.4	9.1	9.9	11.16	18.66	.438	.500	8.31
14X 10X .375/ .594T	38.05	67.9	88.6	573.1	6.2	8.4	6.5	11.19	14.59	.375	.594	5.59
16X 6X .438/ .719T	39.45	80.0	83.5	695.7	6.8	8.7	8.3	11.31	16.72	.438	.600	7.46
18X 6X .438/ .594T	38.90	89.9	86.3	832.0	7.4	9.3	9.6	11.44	18.59	.438	.594	8.28
18X 5X .438/ .719T	39.00	90.3	86.1	838.6	7.4	9.3	9.7	11.47	18.72	.438	.500	8.34
16X 8X .438/ .594T	39.95	80.6	89.7	717.7	6.8	8.9	9.0	11.75	16.59	.438	.600	7.40
18X 9X .438/ .531T	40.05	80.5	90.4	717.1	6.8	8.9	7.9	11.78	16.53	.438	.531	7.38
16X 11X .375/ .594T	40.05	68.6	95.6	595.3	6.2	8.7	6.2	11.78	14.59	.375	.594	5.59
18X 7X .438/ .594T	40.90	91.8	94.8	881.6	7.5	9.6	9.3	12.03	18.59	.438	.594	8.28
18X 8X .438/ .531T	41.24	91.9	96.6	887.1	7.5	9.7	9.2	12.13	18.53	.438	.531	8.25
18X 6X .438/ .719T	41.45	92.6	96.5	899.0	7.5	9.7	9.3	12.19	18.72	.438	.600	8.34
16X 10X .438/ .531T	41.85	81.6	37.4	747.9	6.8	9.2	7.7	12.31	16.53	.438	.531	7.38
16X 9X .438/ .594T	41.96	81.8	97.4	751.8	6.8	9.2	7.7	12.34	16.59	.438	.594	7.40
18X 7X .438/ .656T	42.40	92.3	99.9	910.1	7.5	9.9	9.1	12.47	18.66	.438	.700	8.31
14X 11X .375/ .656T	42.40	69.4	102.9	620.7	6.2	8.9	6.0	12.47	14.66	.375	.656	5.61
18X 9X .438/ .531T	43.04	93.3	104.3	927.9	7.5	9.9	8.9	12.66	18.53	.438	.531	8.25
16X 10X .438/ .594T	44.00	82.9	105.2	783.7	6.9	9.5	7.4	12.94	16.59	.438	.594	7.40
18X 8X .438/ .656T	44.64	94.8	110.3	967.4	7.6	10.2	8.8	13.13	18.66	.438	.600	8.31
16X 11X .438/ .594T	46.00	83.8	112.7	812.5	6.9	9.7	7.2	13.53	16.59	.438	.594	7.40
16X 10X .438/ .656T	46.10	84.0	112.7	817.2	6.9	9.7	7.2	13.56	16.66	.438	.656	7.43
18X 9X .438/ .656T	46.85	96.2	119.8	1012.6	7.6	10.5	8.5	13.78	18.66	.438	.656	8.31
18X 10X .438/ .719T	46.95	96.1	120.8	1011.7	7.6	10.5	8.4	13.81	18.59	.438	.719	8.28
16X 10X .438/ .719T	48.25	85.1	120.5	849.6	6.9	10.0	7.0	14.19	16.72	.438	.719	7.46
16X 11X .438/ .656T	48.35	84.9	121.2	847.6	6.9	10.0	7.0	14.22	16.66	.438	.656	7.43
18X 10X .438/ .531T	49.10	97.5	129.2	1059.4	7.6	10.8	8.2	14.44	18.66	.438	.531	8.31
16X 11X .438/ .719T	50.69	98.0	129.4	879.8	6.9	10.2	6.8	14.91	16.72	.438	.719	7.46
18X 11X .438/ .656T	51.31	86.6	138.6	1092.8	7.6	11.1	7.9	15.89	18.66	.438	.656	8.31
22X 8X .500/ .625T	52.70	119.4	133.2	1381.2	8.5	11.6	10.4	15.50	21.63	.500	.625	10.97
18X 12X .438/ .656T	53.55	99.6	147.9	1128.8	7.6	11.3	7.6	15.75	18.66	.438	.656	8.31
20X 8X .500/ .698T	54.40	121.2	141.0	1436.0	8.5	11.8	18.2	16.00	21.69	.500	.688	11.00
22X 8X .500/ .750T	56.10	122.0	148.7	1484.1	8.6	12.1	10.8	16.50	21.75	.500	.750	11.03
20X 10X .500/ .625T	56.95	123.1	153.6	1499.4	8.6	12.2	9.8	16.75	21.63	.500	.625	10.97
22X 9X .500/ .750T	58.65	124.8	161.1	1551.6	8.6	12.4	9.6	17.25	21.75	.500	.750	11.08

.313 IN. PLATE (AREA= 3.71 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA
	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WEB	FLANGE	THICK	
21X11X .500/.625T	59.09	124.7	164.0	1554.0	8.6	12.5	9.5	17.38	21.63	.500	11.00	.625	19.97	
21X 8X .500/.875T	59.50	125.9	164.2	1581.0	8.6	12.6	9.6	17.50	21.88	.500	8.00	.875	11.10	
21X10X .500/.750T	61.20	126.6	173.2	1613.2	8.6	12.7	9.3	18.00	21.75	.500	10.00	.750	11.03	
21X11X .500/.688T	61.40	126.5	174.7	1614.0	8.6	12.8	9.2	18.06	21.69	.500	11.00	.688	11.00	
21X13X .500/.688T	66.10	129.1	197.1	1716.8	8.6	13.3	8.7	18.44	21.69	.500	13.00	.688	11.00	
21X12X .500/.750T	66.30	129.5	197.5	1725.6	8.6	13.3	8.7	19.50	21.75	.500	12.00	.750	11.03	
21X11X .500/.875T	68.44	131.0	206.2	1778.0	8.6	13.6	8.6	20.13	21.88	.500	11.00	.875	11.10	
24X 9X .625/.750T	73.95	162.4	199.7	2244.4	9.4	13.8	11.2	21.75	24.75	.625	9.00	.750	15.66	
24X10X .625/.750T	76.50	164.9	213.4	2331.1	9.4	14.1	10.9	22.50	24.75	.625	10.00	.750	15.66	
24X11X .625/.750T	79.05	167.2	226.7	2411.7	9.5	14.4	10.6	23.25	24.75	.625	11.00	.750	15.66	
24X10X .625/.875T	80.75	169.1	236.3	2474.4	9.5	14.6	10.6	23.75	24.88	.625	18.00	.875	15.75	
24X 9X .625/1.125T	85.44	173.7	256.0	2633.4	9.6	15.2	10.3	25.13	25.13	.625	9.00	1.125	15.90	
24X13X .625/.875T	93.69	175.3	281.0	2719.7	9.5	15.5	9.7	26.38	24.88	.625	13.00	.875	15.75	
24X14X .625/.875T	92.65	177.0	296.5	2792.5	9.5	15.8	9.4	27.25	24.88	.625	14.00	.875	15.75	
24X11X .625/1.125T	93.09	178.5	335.6	2831.1	9.5	15.9	9.6	27.38	25.13	.625	11.00	1.125	15.90	
24X12X .625/1.125T	96.90	180.5	315.1	2919.3	9.5	16.2	9.3	28.50	25.13	.625	12.00	1.125	15.90	
27X 9X .688/1.125T	97.55	214.1	301.9	3563.1	10.5	16.6	11.0	28.69	28.13	.688	9.00	1.125	19.57	
24X16X .625/.875T	98.60	180.0	327.3	2925.7	9.5	16.3	8.9	29.00	24.88	.625	16.00	.875	15.75	
27X12X .688/.875T	98.80	214.0	312.6	3581.4	10.5	16.7	11.5	29.06	27.88	.688	12.00	.875	19.40	
27X13X .688/.875T	101.80	216.5	329.9	3685.0	10.5	17.0	11.2	29.94	27.88	.688	13.00	.875	19.40	
30X11X .688/1.125T	109.20	220.4	346.1	3829.8	10.5	17.4	11.1	30.94	28.13	.688	11.00	1.125	19.57	
27X14X .688/1.125T	115.19	263.6	383.4	4872.0	11.4	18.5	12.7	33.88	30.88	.750	13.00	.875	23.39	
30X11X .750/1.125T	116.65	227.8	411.0	4168.1	10.5	18.3	10.1	34.31	28.13	.688	14.00	1.125	19.57	
27X15X .688/1.125T	118.59	268.3	401.4	5056.3	11.4	18.8	12.6	34.88	31.13	.750	11.00	1.125	23.58	
27X16X .688/1.125T	120.50	229.8	433.0	4269.5	10.4	18.6	9.9	35.44	28.13	.688	15.00	1.125	19.57	
30X12X .750/1.125T	122.40	271.8	425.7	5215.5	11.5	19.2	12.3	36.00	31.13	.750	12.00	1.125	23.58	
30X16X .750/.875T	124.10	271.8	440.3	5241.4	11.4	19.3	11.9	36.50	30.88	.750	16.00	.875	23.39	
27X16X .688/1.125T	124.30	231.6	454.2	4363.1	10.4	18.8	9.6	36.56	28.13	.688	16.00	1.125	19.57	
30X14X .750/1.125T	130.05	277.9	473.6	5506.4	11.5	19.8	11.6	38.25	31.13	.750	14.00	1.125	23.58	
30X10X .875/1.375T	136.00	296.7	441.7	5025.2	11.3	19.0	12.7	40.00	31.38	.875	10.00	1.375	27.73	
33X12X .875/1.125T	144.09	340.2	438.7	6966.0	12.3	20.5	14.0	42.38	34.13	.875	12.00	1.125	30.14	
33X10X .875/1.375T	144.34	342.9	433.8	7056.1	12.3	20.6	14.1	42.63	34.38	.875	10.00	1.375	30.36	
36X10X .875/1.125T	145.35	378.0	501.6	8071.5	13.2	21.4	16.1	42.75	37.13	.875	10.00	1.125	32.76	
33X11X .875/1.375T	149.60	348.1	531.7	7297.9	12.4	21.0	13.7	44.00	34.38	.875	11.00	1.375	30.36	
33X14X .875/1.125T	151.74	348.5	550.6	7350.8	12.3	21.1	13.4	44.63	34.13	.875	14.00	1.125	30.14	
36X10X .875/1.500T	158.10	398.3	590.0	8990.8	13.4	22.6	15.2	46.50	37.50	.875	10.00	1.500	33.09	
36X14X .875/1.375T	172.55	413.0	698.2	9781.7	13.4	23.7	14.0	50.75	37.38	.875	14.00	1.375	32.98	
36X15X .875/1.500T	183.60	423.7	775.6	10361.7	13.4	24.5	13.4	54.00	37.50	.875	15.00	1.500	33.09	

0.3125 - 5/16 in.



.344 IN. PLATE (AREA= 4.49 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	Y <sub>P</sub>	Y <sub>F</sub>	***** BEAM DIMENSIONS *****			SHEAR AREA		
WT/LT	ZPL	ZFL	INERTIA	AREA				DEPTH	WEB THICK	FLANGE WIDTH		THICK	
3X 2X .125/.188T	2.55	9.1	1.6	4.8	1.0	.5	3.0	.75	3.19	.125	2.00	.188	.44
4X 2X .125/.188T	2.99	12.7	2.2	8.6	1.3	.7	3.9	.88	4.19	.125	2.00	.188	.57
5X 2X .125/.188T	3.20	10.1	2.2	6.3	1.1	.6	2.9	.94	3.19	.125	3.00	.188	.44
6X 2X .125/.188T	3.40	16.5	2.9	13.8	1.6	.8	4.7	1.00	5.19	.125	2.00	.188	.69
7X 2X .125/.188T	3.60	13.9	3.0	11.1	1.4	.8	3.7	1.06	4.19	.125	3.00	.188	.57
8X 2X .125/.188T	4.05	17.9	3.9	17.7	1.8	1.0	4.5	1.19	5.19	.125	3.00	.188	.69
9X 2X .188/.313T	4.69	14.4	3.5	13.1	1.5	.9	3.7	1.38	4.31	.188	2.00	.313	.87
10X 2X .188/.313T	5.10	11.4	3.5	9.7	1.3	.9	2.8	1.50	3.31	.188	3.00	.313	.69
3X 3X .188/.313T	5.30	18.3	4.6	20.8	1.9	1.1	4.5	1.56	5.31	.188	2.00	.313	1.06
4X 3X .188/.313T	5.95	22.3	5.8	30.7	2.2	1.4	5.3	1.75	6.31	.188	2.00	.313	1.25
5X 3X .188/.313T	6.15	25.3	6.3	38.3	2.5	1.5	6.1	1.81	7.25	.188	2.00	.250	1.43
6X 3X .188/.313T	6.39	19.6	6.2	26.6	2.0	1.4	4.3	1.88	5.31	.188	3.00	.313	1.06
7X 3X .188/.313T	6.60	19.7	6.5	27.3	2.1	1.4	4.2	1.94	5.25	.188	4.00	.250	1.05
8X 3X .188/.313T	7.00	26.9	8.0	46.8	2.7	1.7	5.9	2.06	7.25	.188	3.00	.250	1.43
9X 3X .188/.313T	7.24	23.9	8.1	39.8	2.5	1.7	4.9	2.13	6.25	.188	4.00	.250	1.24
10X 3X .188/.313T	7.45	20.5	7.7	31.6	2.2	1.5	4.1	2.19	5.31	.188	4.00	.313	1.06
3X 4X .188/.313T	7.65	27.9	9.2	53.2	2.8	1.9	5.7	2.25	7.31	.188	3.00	.313	1.44
4X 4X .188/.313T	7.85	28.1	9.7	54.8	2.8	2.0	5.6	2.31	7.25	.188	4.00	.250	1.43
5X 4X .188/.313T	8.09	24.7	9.5	45.7	2.6	1.8	4.8	2.38	6.31	.188	4.00	.313	1.25
6X 4X .188/.313T	8.70	29.0	11.3	62.4	3.0	2.2	5.5	2.56	7.31	.188	4.00	.313	1.44
7X 4X .188/.313T	9.15	25.5	11.3	52.2	2.7	2.0	4.6	2.69	6.31	.188	5.00	.313	1.25
8X 4X .188/.313T	9.55	25.2	10.3	49.6	2.6	2.0	4.8	2.81	6.44	.250	3.00	.438	1.70
9X 4X .188/.313T	9.79	29.9	13.5	71.2	3.1	2.4	5.3	2.88	7.31	.188	5.00	.313	1.44
10X 4X .188/.313T	10.20	25.5	11.4	52.9	2.7	2.1	4.6	3.00	6.38	.250	4.00	.375	1.95
3X 5X .250/.375T	10.40	29.5	12.4	67.9	3.0	2.3	5.5	3.06	7.44	.250	3.00	.438	1.95
4X 5X .250/.375T	10.64	33.1	13.3	82.9	3.3	2.5	6.2	3.13	8.38	.250	3.00	.375	2.18
5X 5X .250/.375T	10.85	36.4	14.0	97.6	3.6	2.7	7.0	3.19	9.31	.250	3.00	.313	2.41
6X 5X .250/.375T	11.05	33.5	14.3	86.9	3.3	2.6	6.1	3.25	8.31	.250	4.00	.313	2.16
7X 5X .250/.438T	11.25	33.9	14.7	89.9	3.4	2.7	6.1	3.31	8.44	.250	3.00	.438	2.20
8X 5X .250/.438T	11.49	37.4	15.5	106.6	3.7	2.8	6.9	3.38	9.38	.250	3.00	.375	2.43
9X 5X .250/.438T	11.70	40.8	16.2	123.4	3.9	3.0	7.6	3.44	10.31	.250	3.00	.313	2.66
10X 5X .250/.438T	11.90	34.4	16.1	95.7	3.5	2.8	5.9	3.50	8.38	.250	4.00	.375	2.18
3X 6X .250/.438T	12.10	38.4	17.0	115.4	3.8	3.0	6.8	3.56	9.44	.250	3.00	.438	2.45
4X 6X .250/.438T	12.34	41.9	17.8	134.1	4.1	3.2	7.5	3.63	10.38	.250	3.00	.375	2.68
5X 6X .250/.438T	12.75	42.4	19.1	140.1	4.1	3.3	7.3	3.75	10.31	.250	4.00	.313	2.66
6X 6X .250/.438T	12.95	39.0	19.3	124.5	3.9	3.2	6.5	3.81	9.31	.250	5.00	.313	2.41
7X 6X .250/.438T	13.19	35.4	19.0	107.8	3.6	3.0	5.7	3.88	8.38	.250	5.00	.375	2.18
8X 6X .250/.438T	13.60	43.5	21.3	153.5	4.3	3.5	7.2	4.00	10.38	.250	4.00	.375	2.68
9X 6X .250/.438T	13.80	43.6	21.9	158.5	4.3	3.6	7.1	4.06	10.31	.250	5.00	.313	2.66
10X 6X .250/.438T	14.04	40.0	21.8	137.3	4.0	3.4	6.3	4.13	9.38	.250	5.00	.375	2.43
3X 7X .250/.438T	14.25	36.1	21.2	117.4	3.7	3.2	5.5	4.19	8.44	.250	5.00	.438	2.20
4X 7X .250/.438T	14.45	44.5	23.5	166.0	4.4	3.7	7.1	4.25	10.44	.250	4.00	.438	2.70
5X 7X .250/.438T	14.89	44.7	24.8	170.9	4.4	3.8	6.9	4.38	10.38	.250	5.00	.375	2.68
6X 7X .250/.438T	15.10	40.9	24.4	149.4	4.1	3.7	6.1	4.44	9.44	.250	5.00	.438	2.45
7X 7X .250/.438T	15.30	40.9	24.9	150.5	4.1	3.7	6.0	4.50	9.38	.250	6.00	.375	2.43

0.3438 - 11/32 in.



344 IN. PLATE (AREA = 4.49 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YF	AREA	DEPTH	FLANGE		SHEAR AREA	
WT/FT	ZPL	ZFL	WT/FT	ZPL	THICK					WIDTH	THICK		
8X 6X .250/ .438T	15.74	36.9	24.4	129.1	3.8	3.5	5.3	4.53	8.44	.250	6.00	.438	2.20
10X 5X .250/ .438T	15.95	45.7	27.6	185.6	4.5	4.1	6.7	4.69	10.44	.250	5.00	.438	2.70
10X 6X .250/ .375T	16.15	45.7	28.2	187.2	4.5	4.1	6.6	4.75	10.38	.250	6.00	.375	2.68
9X 7X .250/ .375T	16.59	41.6	28.0	162.8	4.2	3.9	5.8	4.88	9.38	.250	7.00	.375	2.43
8X 7X .250/ .438T	17.20	37.4	27.7	139.8	3.8	3.7	5.1	5.06	8.44	.250	7.00	.438	2.20
10X 7X .250/ .375T	17.44	46.5	31.7	202.2	4.6	4.3	6.4	5.13	10.38	.250	7.00	.375	2.68
9X 7X .250/ .438T	18.05	42.4	31.6	177.1	4.3	4.2	5.6	5.31	9.44	.250	7.00	.438	2.45
10X 4X .313/ .563T	18.29	46.7	29.2	196.0	4.5	4.2	6.7	5.38	10.56	.313	4.00	.563	3.41
12X 4X .313/ .406T	18.29	54.3	30.2	247.4	5.0	4.6	8.2	5.38	12.41	.313	4.00	.406	3.99
8X 8X .250/ .438T	18.70	37.9	30.9	149.5	3.9	3.9	4.8	5.50	8.44	.250	8.00	.438	2.20
10X 7X .250/ .438T	18.90	47.4	35.6	219.1	4.7	4.6	6.2	5.56	10.44	.250	7.00	.438	2.70
12X 4X .313/ .406T	19.14	55.4	32.8	263.8	5.1	4.8	8.1	5.63	12.47	.313	4.00	.406	4.01
9X 8X .250/ .438T	19.55	42.9	35.2	189.2	4.3	4.4	5.4	5.75	9.44	.250	8.00	.438	2.45
12X 5X .313/ .406T	19.65	55.8	34.5	272.0	5.1	4.9	7.9	5.78	12.41	.313	5.00	.406	3.99
12X 4X .313/ .406T	19.99	56.4	35.3	279.8	5.2	5.0	7.9	5.88	12.53	.313	4.00	.406	4.03
10X 8X .250/ .438T	20.40	48.0	39.5	233.9	4.7	4.9	5.9	6.00	10.44	.250	8.00	.438	2.70
12X 5X .313/ .406T	20.71	57.0	37.8	291.1	5.2	5.1	7.7	6.09	12.47	.313	5.00	.406	4.01
12X 6X .313/ .406T	21.05	57.1	38.9	295.0	5.3	5.2	7.6	6.19	12.41	.313	6.00	.406	3.99
12X 5X .313/ .531T	21.79	58.0	41.0	309.4	5.3	5.3	7.5	6.41	12.53	.313	5.00	.531	4.03
12X 6X .313/ .469T	22.30	58.3	42.7	316.6	5.3	5.4	7.4	6.56	12.47	.313	6.00	.469	4.01
12X 7X .313/ .406T	22.41	58.2	43.3	316.6	5.3	5.4	7.3	6.59	12.41	.313	7.00	.406	3.99
12X 6X .313/ .531T	23.60	59.3	46.6	336.2	5.4	5.7	7.2	6.94	12.53	.313	6.00	.531	4.03
12X 7X .313/ .469T	23.90	59.4	47.8	339.2	5.4	5.7	7.1	7.03	12.47	.313	7.00	.469	4.01
14X 4X .375/ .469T	24.24	67.1	42.4	384.9	5.8	5.7	9.1	7.13	14.47	.375	4.00	.469	5.56
14X 4X .375/ .531T	25.09	68.3	45.3	405.3	5.8	5.9	8.9	7.38	14.53	.375	4.00	.531	5.50
12X 7X .313/ .531T	25.40	60.4	52.3	360.6	5.5	6.0	6.9	7.47	12.53	.313	7.00	.531	4.03
12X 8X .313/ .469T	25.58	60.2	52.8	368.5	5.5	6.0	6.8	7.50	12.47	.313	8.00	.469	4.01
14X 4X .375/ .594T	25.94	69.5	48.2	425.0	5.9	6.1	8.8	7.63	14.59	.375	4.00	.594	5.60
14X 5X .375/ .656T	26.45	61.1	48.8	352.8	5.4	5.8	7.2	7.78	12.66	.375	5.00	.656	4.80
14X 4X .375/ .531T	26.79	70.6	51.0	444.2	6.0	6.3	8.7	7.88	14.66	.375	4.00	.531	5.63
12X 5X .375/ .531T	26.89	70.4	51.8	443.6	6.0	6.3	8.6	7.91	14.53	.375	5.00	.531	5.50
12X 8X .313/ .531T	27.20	61.2	57.9	383.1	5.5	6.3	8.6	8.00	12.53	.313	8.00	.531	4.03
14X 6X .375/ .531T	28.70	72.1	58.2	479.1	6.1	6.6	8.2	8.44	14.53	.375	6.00	.531	5.50
14X 5X .375/ .656T	29.00	72.7	58.9	488.1	6.1	6.7	8.3	8.53	14.66	.375	5.00	.656	5.63
14X 7X .375/ .469T	29.00	72.2	59.5	482.9	6.1	6.7	8.1	8.53	14.47	.375	7.00	.469	5.56
12X 9X .313/ .469T	29.00	61.9	63.4	403.4	5.6	6.5	6.4	8.53	12.53	.313	9.00	.531	4.03
14X 6X .375/ .594T	29.95	73.3	62.5	503.7	6.2	6.9	8.1	8.81	14.59	.375	6.00	.594	5.60
14X 7X .375/ .531T	30.50	73.5	64.6	511.1	6.2	7.0	7.9	9.07	14.53	.375	7.00	.531	5.50
14X 8X .375/ .469T	30.60	73.4	65.1	511.0	6.2	7.0	7.8	9.00	14.47	.375	8.00	.469	5.56
12X 10X .313/ .531T	30.80	62.5	69.0	422.3	5.6	6.8	6.1	9.06	12.53	.313	10.00	.531	4.03
14X 6X .375/ .656T	31.25	74.3	66.7	527.6	6.2	7.1	7.9	9.19	14.66	.375	6.00	.656	5.63
14X 7X .375/ .594T	31.99	74.6	69.6	537.8	6.2	7.2	7.7	9.41	14.59	.375	7.00	.594	5.60
14X 8X .375/ .531T	32.30	74.7	71.8	541.1	6.2	7.2	7.6	9.50	14.53	.375	8.00	.531	5.50
16X 5X .438/ .531T	32.84	84.3	64.3	615.3	6.6	7.3	9.6	9.66	16.53	.438	5.00	.531	7.39
16X 5X .438/ .594T	33.90	85.7	68.3	643.6	6.7	7.5	9.4	9.97	16.59	.438	5.00	.594	7.42

0.3438 - 11/32 in.

0.344 IN. PLATE (AREA= 4.49 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			***** BEAM DIMENSIONS *****			***** FLANGE *****			SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
14X 8X .375/.594T	34.00	75.8	76.8	6.3	7.5	7.4	10.00	14.59	.375	8.00	.594	.594	5.60
14X 9X .375/.531T	34.10	75.7	77.3	6.3	7.5	7.4	10.03	14.53	.375	9.00	.531	.531	5.58
16X 6X .438/.531T	34.65	86.4	71.5	6.7	7.6	9.2	10.19	16.53	.438	6.00	.531	.531	7.39
16X 5X .438/.656T	34.95	87.1	72.2	6.7	7.7	9.3	10.28	16.66	.438	5.00	.656	.656	7.45
12X10X .375/.594T	35.50	65.0	76.5	5.5	7.0	5.9	10.44	12.59	.375	10.00	.594	.594	4.85
14X 8X .375/.656T	35.70	76.8	82.3	6.3	7.8	7.2	10.50	14.66	.375	8.00	.656	.656	5.63
16X 6X .438/.594T	35.90	87.9	76.3	6.8	7.9	9.1	10.56	16.59	.438	6.00	.594	.594	7.42
14X10X .375/.531T	35.90	76.6	83.6	6.3	7.8	7.1	10.56	14.53	.375	10.00	.531	.531	5.58
16X 5X .438/.719T	36.01	88.3	76.2	6.8	7.9	9.2	10.59	16.72	.438	5.00	.719	.719	7.47
14X 9X .375/.594T	36.01	76.8	83.8	6.3	7.8	7.1	10.59	14.59	.375	9.00	.594	.594	5.60
16X 6X .438/.656T	37.20	89.2	91.0	6.8	8.1	8.9	10.94	16.66	.438	6.00	.656	.656	7.45
18X 6X .438/.531T	37.60	99.5	83.2	7.4	8.6	10.3	11.06	18.53	.438	6.00	.531	.531	8.27
18X 5X .438/.656T	37.94	100.3	84.0	7.5	8.7	10.3	11.16	18.66	.438	5.00	.656	.656	8.32
14X10X .375/.594T	38.05	77.6	90.8	6.3	8.1	6.9	11.19	14.59	.375	10.00	.594	.594	5.60
16X 6X .438/.719T	38.45	90.4	95.7	6.9	8.3	8.8	11.31	16.72	.438	6.00	.719	.719	7.47
18X 6X .438/.594T	38.90	101.2	88.6	7.5	8.8	10.1	11.44	18.59	.438	6.00	.594	.594	8.29
18X 5X .438/.719T	39.00	101.7	88.4	7.5	8.9	10.2	11.47	18.72	.438	5.00	.719	.719	8.35
16X 8X .438/.594T	39.95	91.2	92.1	6.9	8.5	8.4	11.75	16.59	.438	8.00	.594	.594	7.42
14X11X .375/.594T	40.05	78.4	98.0	6.3	8.3	6.6	11.78	14.59	.375	11.00	.594	.594	5.68
18X 7X .438/.594T	40.90	103.3	97.4	7.6	9.2	9.7	12.03	18.59	.438	7.00	.594	.594	8.29
18X 8X .438/.531T	41.24	103.4	99.2	7.6	9.2	9.6	12.13	18.53	.438	8.00	.531	.531	8.27
18X 6X .438/.719T	41.45	104.2	99.1	6.9	9.3	9.8	12.19	18.72	.438	6.00	.719	.719	8.35
16X10X .438/.531T	41.85	92.3	100.0	6.9	8.8	8.1	12.31	16.53	.438	10.00	.531	.531	7.39
16X 9X .438/.594T	41.96	92.5	100.0	7.0	8.8	8.1	12.34	16.59	.438	9.00	.594	.594	7.42
18X 7X .438/.656T	42.40	103.9	102.7	7.6	9.4	9.6	12.47	18.66	.438	7.00	.656	.656	8.32
14X11X .375/.656T	42.40	79.3	105.4	6.3	8.6	6.4	12.47	14.66	.375	11.00	.656	.656	5.63
16X10X .438/.531T	43.04	105.0	107.0	7.6	9.3	9.3	12.66	18.53	.438	9.00	.531	.531	8.27
16X10X .438/.594T	44.00	93.7	108.0	7.0	9.1	7.9	12.94	16.59	.438	10.00	.594	.594	7.42
18X 8X .438/.656T	44.64	106.7	113.3	7.7	9.8	9.2	13.13	18.66	.438	8.00	.656	.656	8.32
16X11X .438/.594T	46.00	94.7	115.7	7.0	9.3	7.6	13.53	16.59	.438	11.00	.594	.594	7.42
16X10X .438/.656T	46.10	95.0	115.7	7.0	9.3	7.7	13.56	16.66	.438	10.00	.656	.656	7.45
18X 9X .438/.656T	46.85	108.3	123.8	7.7	10.1	8.9	13.78	18.66	.438	9.00	.656	.656	8.32
18X10X .438/.594T	46.95	108.1	123.9	7.7	10.1	8.8	13.81	18.59	.438	10.00	.594	.594	8.29
16X10X .438/.719T	48.25	96.2	123.7	7.0	9.6	7.5	14.19	16.72	.438	10.00	.719	.719	7.47
16X11X .438/.656T	48.35	96.0	124.4	7.0	9.6	7.4	14.22	16.66	.438	11.00	.656	.656	7.45
18X10X .438/.656T	49.10	109.7	132.6	7.8	10.4	8.6	14.44	18.66	.438	10.00	.656	.656	8.32
16X11X .438/.719T	50.69	97.1	132.8	7.0	9.9	7.2	14.91	16.72	.438	11.00	.719	.719	7.47
18X11X .438/.656T	51.31	110.9	142.2	7.8	10.7	8.3	15.09	18.66	.438	11.00	.656	.656	8.32
21X 8X .500/.625T	52.70	132.8	136.8	8.6	11.2	10.8	15.50	21.63	.500	8.00	.625	.625	18.99
18X12X .438/.656T	53.55	112.0	151.7	7.8	10.9	8.1	15.75	18.66	.438	12.00	.656	.656	8.32
21X10X .500/.680T	54.40	134.7	144.9	8.7	11.4	10.6	16.00	21.69	.500	8.00	.680	.680	11.02
21X 8X .500/.750T	56.10	136.5	152.7	8.7	11.7	10.4	16.50	21.75	.500	8.00	.750	.750	11.05
21X10X .500/.625T	56.95	136.8	157.7	8.7	11.8	10.2	16.75	21.63	.500	10.00	.625	.625	18.99
21X 9X .500/.750T	58.65	138.7	165.4	8.8	12.0	10.1	17.25	21.75	.500	9.00	.750	.750	11.05

0.3438 - 11/32 in.



.344 IN. PLATE (AREA= 4.49 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS		R	YF	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA	
	ZPL	ZFL						INERTIA	WEB THICK	FLANGE WIDTH		THICK
2X11X .500/.625	59.39	138.5	168.3	1669.8	8.7	12.1	9.9	17.38	.500	11.00	.625	18.99
2X11X .500/.875	59.50	139.8	168.6	1698.6	8.8	12.1	10.1	17.50	.500	8.00	.875	11.11
2X10X .500/.750	61.20	140.6	177.8	1734.3	8.8	12.3	9.8	18.00	.500	10.00	.750	11.05
2X11X .500/.688	61.40	140.5	179.3	1735.5	8.8	12.4	9.7	18.06	.500	11.00	.688	11.02
2X13X .500/.688	66.10	143.4	202.3	1848.9	8.8	12.9	9.1	19.44	.500	13.00	.688	11.02
2X12X .500/.750	66.30	143.8	202.7	1850.4	8.8	12.9	9.2	19.50	.500	12.00	.750	11.05
2X11X .500/.875	68.44	145.4	211.7	1915.8	8.8	13.2	9.1	20.13	.500	11.00	.875	11.11
2X11X .625/.750	73.95	177.6	204.9	2387.7	9.5	13.4	11.7	21.75	.625	9.00	.750	15.68
2X10X .625/.750	76.50	180.3	218.9	2461.2	9.6	13.8	11.3	22.50	.625	10.00	.750	15.68
2X11X .625/.875	79.05	182.8	232.6	2568.1	9.6	14.1	11.0	23.25	.625	11.00	.875	15.68
2X10X .625/.875	80.75	184.8	240.4	2635.4	9.7	14.3	11.0	23.75	.625	10.00	.875	15.76
2X13X .625/1.125	85.44	189.7	262.7	2806.5	9.7	14.8	10.7	25.13	.625	9.00	1.125	15.92
2X13X .625/.875	89.69	191.5	298.1	2901.2	9.7	15.2	10.1	26.38	.625	13.00	.875	15.76
2X14X .625/.875	92.65	193.3	304.0	2980.4	9.7	15.4	9.8	27.25	.625	14.00	.875	15.76
2X11X .625/1.125	93.09	194.8	303.1	3021.1	9.7	15.5	10.0	27.38	.625	11.00	1.125	15.92
2X12X .625/1.125	96.90	197.0	323.1	3117.1	9.7	15.8	9.6	28.50	.625	12.00	1.125	15.92
2X13X .625/1.125	97.55	231.7	309.4	3725.4	10.7	16.3	12.2	28.69	.688	9.00	1.125	19.59
2X16X .625/.875	98.60	196.5	335.5	3125.4	9.7	15.9	9.3	29.00	.625	16.00	.875	15.76
2X12X .688/.875	98.88	231.6	320.2	3793.3	10.6	16.4	11.8	29.06	.688	12.00	.875	19.42
2X13X .688/.875	101.80	234.2	337.9	3901.3	10.6	16.7	11.6	29.94	.688	13.00	.875	19.42
2X11X .688/1.125	105.20	238.4	354.6	4050.6	10.7	17.0	11.4	30.94	.688	11.00	1.125	19.59
2X13X .750/.875	115.19	282.9	392.2	5131.5	11.6	18.1	13.1	33.88	.750	13.00	.875	23.42
2X14X .688/1.125	116.65	246.2	420.8	4422.4	10.7	18.0	10.5	34.31	.688	14.00	1.125	19.59
2X11X .750/1.125	118.59	287.8	410.6	5326.1	11.6	18.5	13.0	34.88	.750	11.00	1.125	23.61
2X12X .688/1.125	120.50	248.3	443.4	4531.9	10.7	18.3	10.2	35.44	.688	15.00	1.125	19.59
2X12X .750/1.125	122.40	291.5	435.4	5495.5	11.6	18.9	12.6	36.00	.750	12.00	1.125	23.61
2X16X .750/.875	124.10	291.5	450.2	5524.3	11.6	19.0	12.3	36.50	.750	16.00	.875	23.42
2X16X .688/1.125	124.30	250.3	465.0	4632.9	10.6	18.5	10.0	36.56	.688	16.00	1.125	19.59
2X14X .750/1.125	130.05	297.9	484.3	5805.3	11.7	19.5	12.0	38.25	.750	14.00	1.125	23.61
2X10X .875/1.375	136.00	316.2	451.5	5890.9	11.5	18.7	13.1	40.00	.875	10.00	1.375	27.76
2X12X .875/1.125	144.09	361.3	509.2	7205.7	12.5	20.2	14.3	42.38	.875	12.00	1.125	30.16
2X10X .875/1.375	144.94	364.1	510.4	7378.0	12.5	20.3	14.5	42.63	.875	10.00	1.375	30.38
2X11X .875/1.125	145.35	400.3	512.1	8419.4	13.3	21.0	16.4	44.00	.875	10.00	1.125	32.79
2X11X .875/1.375	149.50	369.4	542.8	7633.3	12.5	20.7	14.1	44.00	.875	11.00	1.375	30.38
2X14X .875/1.125	151.74	369.9	562.0	7690.4	12.5	20.8	13.7	44.63	.875	14.00	1.125	30.16
2X10X .875/1.500	158.18	421.4	601.9	9380.2	13.6	22.3	15.6	46.50	.875	10.00	1.500	33.11
2X14X .875/1.375	172.55	436.7	711.9	10210.9	13.6	23.4	14.3	50.75	.875	14.00	1.375	33.01
2X15X .875/1.500	183.60	447.9	798.6	10813.8	13.6	24.2	13.7	54.00	.875	15.00	1.500	33.11

0.3438 - 11/32 in.

0.375 IN. PLATE (AREA= 5.34 SQ.IN.)

SECTION MODULUS				***** BEAM DIMENSIONS *****				SHEAR AREA					
NOMINAL SIZE	WT/FT	ZPL		INERTIA	R	YP	VF	AREA	DEPTH	FLANGE		SHEAR AREA	
		ZFL	ZFL							WEB THICK	WIDTH		THICK
3X 2X .125/.188T	2.55	10.0	1.6	4.9	.9	.5	3.1	.75	3.19	.125	2.00	.188	.45
4X 2X .125/.188T	2.99	14.2	2.2	8.9	1.2	.6	3.9	.88	4.19	.125	2.00	.188	.57
3X 3X .125/.188T	3.20	11.3	2.2	6.6	1.0	.6	3.0	.94	3.19	.125	3.00	.188	.45
5X 2X .125/.188T	3.40	10.6	3.0	14.2	1.5	.8	4.8	1.00	5.19	.125	2.00	.188	.70
4X 3X .125/.188T	3.60	15.7	3.0	11.5	1.3	.7	3.8	1.06	4.19	.125	3.00	.188	.57
5X 3X .125/.188T	4.05	20.3	3.9	18.3	1.7	.9	4.7	1.19	5.19	.125	3.00	.188	.70
4X 2X .188/.313T	4.69	16.3	3.6	13.7	1.4	.8	3.8	1.38	4.31	.188	2.00	.313	.88
3X 3X .188/.313T	5.10	13.0	3.5	10.2	1.2	.8	2.9	1.50	3.31	.188	3.00	.313	.69
5X 2X .188/.313T	5.30	20.9	4.6	21.6	1.8	1.0	4.7	1.56	5.31	.188	2.00	.313	1.07
6X 2X .188/.313T	5.95	25.6	5.9	32.0	2.1	1.3	5.4	1.75	6.31	.188	2.00	.313	1.26
7X 2X .188/.250T	6.15	29.0	6.4	39.9	2.4	1.4	6.3	1.81	7.25	.188	2.00	.250	1.43
5X 3X .188/.313T	6.39	22.6	6.2	27.8	2.0	1.2	4.5	1.88	5.31	.188	3.00	.313	1.07
5X 4X .188/.250T	6.60	22.6	6.5	28.6	2.0	1.3	4.4	1.94	5.25	.188	4.00	.250	1.06
7X 3X .188/.250T	7.00	31.0	8.1	48.9	2.6	1.6	6.0	2.06	7.25	.188	3.00	.250	1.43
6X 4X .188/.250T	7.24	27.5	8.2	41.7	2.4	1.5	5.1	2.13	6.25	.188	4.00	.250	1.25
5X 4X .188/.313T	7.45	23.6	7.8	33.3	2.1	1.4	4.3	2.19	5.31	.188	4.00	.313	1.07
7X 3X .188/.313T	7.65	32.2	9.4	55.7	2.7	1.7	6.0	2.25	7.31	.188	3.00	.313	1.44
7X 4X .188/.250T	7.85	32.4	9.8	57.4	2.7	1.8	5.9	2.31	7.25	.188	4.00	.250	1.43
6X 4X .188/.313T	8.09	28.6	9.6	48.1	2.5	1.7	5.0	2.38	6.31	.188	4.00	.313	1.26
7X 4X .188/.313T	8.70	33.5	11.5	65.7	2.9	2.0	5.7	2.56	7.31	.188	4.00	.313	1.44
6X 5X .188/.313T	9.15	29.5	11.5	55.2	2.6	1.9	4.8	2.69	6.31	.188	5.00	.313	1.26
5X 5X .250/.438T	9.55	29.0	10.4	52.3	2.5	1.8	5.0	2.81	6.44	.250	3.00	.438	1.70
7X 5X .188/.313T	9.79	34.6	13.7	75.3	3.0	2.2	5.5	2.88	7.31	.188	5.00	.313	1.44
6X 4X .250/.375T	10.20	29.4	11.6	56.0	2.6	1.9	4.8	3.00	6.38	.250	4.00	.375	1.69
7X 3X .250/.438T	10.40	34.0	12.6	71.8	2.9	2.1	5.7	3.06	7.44	.250	3.00	.438	1.95
8X 3X .250/.375T	10.64	38.1	13.5	87.4	3.2	2.3	6.5	3.13	8.38	.250	3.00	.375	2.19
9X 3X .250/.313T	10.85	42.0	14.2	102.9	3.5	2.5	7.2	3.19	9.31	.250	3.00	.313	2.42
8X 4X .250/.313T	11.05	38.6	14.5	91.8	3.3	2.4	6.3	3.25	8.31	.250	4.00	.313	2.17
8X 3X .250/.438T	11.25	39.1	14.9	95.0	3.3	2.4	6.4	3.31	8.44	.250	3.00	.438	2.20
9X 3X .250/.375T	11.49	43.2	15.8	112.6	3.6	2.6	7.1	3.38	9.38	.250	3.00	.375	2.44
10X 3X .250/.313T	11.70	47.0	16.4	130.2	3.8	2.8	7.9	3.44	10.31	.250	3.00	.313	2.67
8X 4X .250/.375T	11.90	39.7	16.3	101.3	3.4	2.6	6.2	3.50	8.38	.250	4.00	.375	2.19
9X 3X .250/.438T	12.10	44.3	17.3	122.0	3.7	2.8	7.1	3.56	9.44	.250	3.00	.438	2.45
10X 3X .250/.375T	12.34	48.2	18.1	141.6	4.0	2.9	7.8	3.63	10.38	.250	3.00	.375	2.69
11X 4X .250/.313T	12.75	48.8	19.4	148.2	4.0	3.0	7.6	3.75	10.31	.250	4.00	.313	2.67
9X 5X .250/.313T	12.95	45.0	19.6	132.1	3.8	2.9	6.8	3.81	9.31	.250	5.00	.313	2.42
8X 5X .250/.375T	13.19	40.9	19.3	114.7	3.5	2.8	6.0	3.88	8.38	.250	5.00	.375	2.19
10X 4X .250/.375T	13.60	50.2	21.7	162.7	4.2	3.2	7.5	4.00	10.38	.250	4.00	.375	2.69
11X 5X .250/.313T	13.80	50.3	22.3	165.0	4.2	3.3	7.4	4.06	10.31	.250	5.00	.313	2.67
9X 5X .250/.375T	14.04	46.2	22.1	146.8	3.9	3.2	6.6	4.13	9.38	.250	5.00	.375	2.44
8X 5X .250/.438T	14.25	41.8	21.5	125.5	3.6	3.0	5.8	4.19	8.44	.250	5.00	.438	2.20
10X 4X .250/.438T	14.45	51.3	23.9	176.4	4.3	3.4	7.4	4.25	10.44	.250	4.00	.438	2.78
11X 5X .250/.375T	14.89	51.6	25.1	181.8	4.3	3.5	7.2	4.38	10.38	.250	5.00	.375	2.69
9X 5X .250/.438T	15.10	47.3	24.7	159.4	4.0	3.4	6.4	4.44	9.44	.250	5.00	.438	2.45
9X 6X .250/.375T	15.30	47.2	25.3	160.6	4.0	3.4	6.4	4.50	9.38	.250	6.00	.375	2.44

0.3750 - 3/8 in.



.375 IN. PLATE (AREA= 5.34 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	***** BEAM DIMENSIONS *****				SHEAR AREA	
		ZPL	ZFL					AREA	DEPTH	WEB THICK	WIDTH		FLANGE THICK
8X 6X .250/.438T	15.74	42.7	24.8	138.3	3.7	3.2	5.6	4.63	8.44	.250	6.00	.438	2.20
10X 5X .250/.438T	15.95	52.8	28.0	198.0	4.4	3.8	7.1	4.69	10.44	.250	5.00	.438	2.70
10X 6X .250/.375T	16.15	52.8	28.7	199.8	4.4	3.8	7.0	4.75	10.38	.250	6.00	.375	2.69
9X 7X .250/.375T	16.59	48.1	28.5	174.4	4.1	3.6	6.1	4.88	9.38	.250	7.00	.375	2.44
8X 7X .250/.438T	17.20	43.4	28.1	150.2	3.8	3.5	5.4	5.06	8.44	.250	7.00	.438	2.20
10X 7X .250/.375T	17.44	53.7	32.2	216.5	4.5	4.0	6.7	5.13	10.38	.250	7.00	.375	2.69
9X 7X .250/.438T	18.05	49.1	32.1	190.3	4.2	3.9	5.9	5.31	9.44	.250	7.00	.438	2.45
10X 4X .313/.563T	18.29	53.7	29.8	209.4	4.4	3.9	7.0	5.38	10.56	.313	4.00	.563	3.42
12X 4X .313/.406T	18.29	62.2	30.8	263.2	5.0	4.2	8.6	5.38	12.41	.313	4.00	.406	4.00
8X 8X .250/.438T	18.70	43.9	31.4	161.3	3.9	3.7	5.1	5.50	8.44	.250	8.00	.438	2.20
10X 7X .250/.438T	18.90	54.8	36.1	235.4	4.6	4.3	6.5	5.56	10.44	.250	7.00	.438	2.70
12X 4X .313/.469T	19.14	63.5	33.4	281.1	5.1	4.4	8.4	5.63	12.47	.313	4.00	.469	4.02
9X 8X .250/.438T	19.55	49.7	35.7	204.6	4.3	4.1	5.7	5.75	9.44	.250	8.00	.438	2.45
12X 5X .313/.406T	19.65	64.0	35.2	290.2	5.1	4.5	8.2	5.78	12.41	.313	5.00	.406	4.00
12X 4X .313/.531T	19.99	64.7	36.0	298.6	5.2	4.6	8.3	5.88	12.53	.313	4.00	.531	4.04
10X 8X .250/.438T	20.40	55.5	40.2	252.0	4.7	4.5	6.3	6.00	10.44	.250	8.00	.438	2.70
12X 5X .313/.469T	20.71	65.3	38.5	311.1	5.2	4.8	8.1	6.09	12.47	.313	5.00	.469	4.02
12X 6X .313/.406T	21.05	65.5	39.6	315.4	5.2	4.8	8.0	6.19	12.41	.313	6.00	.406	4.00
12X 5X .313/.531T	21.79	66.5	41.8	331.2	5.3	5.0	7.9	6.41	12.53	.313	5.00	.531	4.04
12X 6X .313/.469T	22.38	66.8	43.5	338.6	5.3	5.1	7.8	6.56	12.47	.313	6.00	.469	4.02
12X 7X .313/.406T	22.41	66.8	44.1	339.4	5.3	5.1	7.7	6.59	12.41	.313	7.00	.406	4.00
12X 6X .313/.531T	23.60	68.0	47.5	361.0	5.4	5.3	7.6	6.94	12.53	.313	6.00	.531	4.04
12X 7X .313/.469T	23.90	68.0	48.7	364.4	5.4	5.4	7.5	7.03	12.47	.313	7.00	.469	4.02
14X 4X .375/.469T	24.24	76.3	43.4	410.4	5.7	5.4	9.5	7.13	14.47	.375	4.00	.469	5.57
14X 4X .375/.531T	25.09	77.7	46.3	432.5	5.8	5.6	9.3	7.38	14.53	.375	4.00	.531	5.59
12X 7X .313/.531T	25.40	69.2	53.3	388.3	5.5	5.6	7.3	7.47	12.53	.313	7.00	.531	4.04
12X 8X .313/.469T	25.50	69.1	53.8	388.3	5.5	5.6	7.2	7.50	12.47	.313	8.00	.469	4.02
14X 4X .375/.594T	25.94	79.0	49.3	454.1	5.9	5.7	9.2	7.63	14.59	.375	4.00	.594	5.61
12X 5X .375/.656T	26.45	69.6	49.9	378.7	5.4	5.4	7.6	7.78	12.66	.375	5.00	.656	4.89
14X 4X .375/.656T	26.79	80.2	52.1	475.0	6.0	5.9	9.1	7.88	14.66	.375	4.00	.656	5.64
14X 5X .375/.531T	26.99	80.0	52.9	474.6	6.0	5.9	9.0	7.91	14.53	.375	5.00	.531	5.59
12X 8X .313/.531T	27.20	70.2	59.0	413.6	5.6	5.9	7.0	8.00	12.53	.313	8.00	.531	4.04
14X 6X .375/.656T	29.00	82.6	60.2	523.4	6.1	6.3	8.6	8.44	14.53	.375	6.00	.531	5.59
14X 5X .375/.594T	29.00	82.0	60.7	518.0	6.1	6.3	8.7	8.53	14.66	.375	5.00	.656	5.64
14X 7X .375/.469T	29.00	82.0	60.7	518.0	6.1	6.3	8.5	8.53	14.47	.375	7.00	.469	5.57
12X 9X .313/.531T	29.00	71.0	64.6	436.6	5.6	6.1	6.8	8.53	12.53	.313	9.00	.531	4.04
14X 6X .375/.594T	29.95	83.2	63.9	540.8	6.2	6.5	8.5	8.81	14.59	.375	6.00	.594	5.61
14X 7X .375/.531T	30.50	83.5	65.9	549.1	6.2	6.6	8.3	8.97	14.53	.375	7.00	.531	5.59
14X 8X .375/.469T	30.60	83.4	66.5	549.0	6.2	6.6	8.3	9.00	14.47	.375	8.00	.469	5.57
12X 10X .313/.531T	30.80	71.7	70.3	458.1	5.6	6.4	6.5	9.06	12.53	.313	10.00	.531	4.04
14X 6X .375/.656T	31.25	84.4	68.2	567.2	6.2	6.7	8.3	9.19	14.66	.375	6.00	.656	5.64
14X 7X .375/.594T	31.99	84.8	71.1	578.6	6.3	6.8	8.1	9.41	14.59	.375	7.00	.594	5.61
14X 8X .375/.531T	32.30	84.8	72.5	582.4	6.3	6.9	8.0	9.50	14.53	.375	8.00	.531	5.59
16X 5X .438/.531T	32.84	95.0	55.8	657.3	6.6	6.9	10.0	9.66	16.53	.438	5.00	.531	7.40
16X 5X .438/.594T	33.90	96.6	60.9	688.1	6.7	7.1	9.8	9.97	16.59	.438	5.00	.594	7.43

0.3750 - 3/8 in.

0.375 IN. PLATE (AREA = 5.34 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA				DEPTH	WEB THICK	FLANGE THICK	
14X 8X .375/.594T	34.00	86.1	78.4	614.3	6.3	7.1	7.8	10.00	.375	.594	5.61
14X 9X .375/.531T	34.10	86.0	78.9	613.0	6.3	7.1	7.8	10.03	.375	.531	5.59
16X 6X .438/.531T	34.65	97.3	73.2	706.3	6.7	7.3	9.6	10.19	.438	.531	7.40
16X 5X .438/.566T	34.95	98.0	74.0	718.2	6.8	7.3	9.7	10.28	.438	.566	7.46
12X10X .375/.594T	35.50	74.2	78.0	493.0	5.6	6.6	6.3	10.44	.375	.594	4.86
14X 8X .375/.566T	35.70	87.3	84.0	643.7	6.4	7.4	7.7	10.50	.375	.566	5.64
16X 6X .438/.594T	35.90	98.9	78.1	740.4	6.8	7.5	9.5	10.56	.438	.594	7.43
14X10X .375/.531T	36.01	99.4	78.0	747.4	6.8	7.5	9.6	10.59	.375	.531	5.59
16X 5X .438/.719T	36.01	87.2	85.6	646.4	6.4	7.4	7.6	10.59	.438	.719	7.49
14X 9X .375/.594T	37.20	100.4	82.9	773.7	6.9	7.7	9.3	10.94	.375	.594	5.61
16X 6X .438/.656T	37.60	111.7	85.3	914.1	7.5	8.2	10.7	11.06	.438	.656	7.46
18X 6X .438/.531T	37.94	112.5	86.1	928.4	7.5	8.3	10.8	11.16	.438	.531	8.28
18X 5X .438/.594T	38.05	108.2	92.8	676.6	6.4	7.7	7.3	11.19	.375	.594	5.61
16X 6X .438/.719T	38.45	101.8	87.8	805.8	7.0	7.9	9.2	11.31	.438	.719	7.49
18X 7X .438/.594T	40.90	115.9	99.7	1016.7	7.6	8.6	10.2	12.03	.438	.594	8.31
18X 6X .438/.531T	41.24	116.0	101.5	1023.6	7.7	8.8	10.1	12.13	.438	.531	8.28
18X 6X .438/.719T	41.45	116.9	101.5	1037.2	7.7	8.9	10.2	12.19	.438	.719	8.36
16X10X .438/.594T	41.85	103.9	102.2	871.0	7.0	8.4	8.5	12.31	.438	.594	7.43
16X 9X .438/.594T	41.96	104.1	102.3	875.4	7.0	8.4	8.6	12.34	.438	.594	7.43
18X 7X .438/.656T	42.40	116.6	105.2	1052.8	7.7	9.0	10.0	12.47	.438	.656	8.34
14X11X .375/.656T	42.40	90.1	107.7	737.8	6.4	8.2	6.8	12.47	.375	.656	5.64
18X 9X .438/.531T	43.04	117.8	109.6	1073.1	7.7	9.1	9.8	12.66	.438	.531	8.28
16X10X .438/.594T	44.00	105.4	110.4	915.1	7.1	8.7	8.3	12.94	.438	.594	7.43
18X 8X .438/.656T	44.64	119.6	115.9	1120.7	7.8	9.4	9.7	13.13	.438	.656	8.34
16X11X .438/.594T	46.00	106.6	118.3	951.2	7.1	8.9	8.0	13.53	.438	.594	7.43
16X10X .438/.656T	46.10	106.9	118.4	956.7	7.1	9.0	8.1	13.56	.438	.656	7.46
18X 9X .438/.656T	46.85	121.4	125.9	1176.2	7.8	9.7	9.3	13.78	.438	.656	8.34
16X10X .438/.594T	46.95	121.2	126.8	1175.5	7.8	9.7	9.3	13.81	.438	.594	8.31
18X10X .438/.719T	48.25	108.2	126.5	997.1	7.1	9.2	7.9	14.19	.438	.719	7.49
16X11X .438/.656T	48.35	108.0	127.2	995.1	7.1	9.2	7.8	14.22	.438	.656	7.46
18X10X .438/.594T	49.10	122.9	135.7	1227.6	7.9	10.0	9.0	14.44	.438	.594	8.34
16X11X .438/.719T	50.69	109.3	135.9	1035.4	7.2	9.5	7.6	14.91	.438	.719	7.49
18X11X .438/.656T	51.31	124.3	145.5	1275.7	7.9	10.3	8.8	15.09	.438	.656	8.34
21X 8X .500/.625T	52.70	147.3	140.2	1580.8	8.7	10.7	11.3	15.50	.500	.625	11.00
18X12X .438/.656T	53.55	125.5	155.2	1320.7	7.9	10.5	8.5	15.75	.438	.656	8.34
21X 8X .500/.688T	54.40	149.4	148.4	1643.2	8.8	11.0	11.1	16.00	.500	.688	11.03
21X 8X .500/.750T	56.10	151.4	156.5	1702.6	8.8	11.2	10.9	16.50	.500	.750	11.06
21X10X .500/.625T	56.95	151.8	161.5	1721.7	8.8	11.3	10.7	16.75	.500	.625	11.00
21X 9X .500/.750T	58.65	153.8	169.5	1783.7	8.9	11.6	10.5	17.25	.500	.750	11.06

0.3750 - 3/8 in.



.375 IN. PLATE (AREA= 5.34 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
	WT/FT	ZPL	ZFL							WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	153.6	172.4	1787.5	8.9	11.6	10.4	17.38	21.63	.500	11.00	.625	11.00
21X 8X .500/.875T	59.50	155.0	172.8	1818.3	8.9	11.7	10.5	17.50	21.88	.500	8.00	.875	11.13
21X10X .500/.750T	61.20	155.8	182.1	1857.9	8.9	11.9	10.2	18.00	21.75	.500	10.00	.750	11.06
21X11X .500/.688T	61.40	155.7	183.6	1859.3	8.9	11.9	10.1	18.06	21.69	.500	11.00	.688	11.03
21X13X .500/.688T	66.10	158.9	207.1	1984.2	8.9	12.5	9.6	19.44	21.69	.500	13.00	.688	11.03
21X12X .500/.750T	66.30	159.3	207.6	1994.3	9.0	12.5	9.6	19.50	21.75	.500	12.00	.750	11.06
21X11X .500/.875T	68.44	161.1	216.8	2057.2	9.0	12.8	9.5	20.13	21.88	.500	11.00	.875	11.13
24X 9X .625/.750T	73.95	194.2	218.0	2535.2	9.7	13.1	12.1	21.75	24.75	.625	9.00	.750	15.70
24X10X .625/.750T	76.50	197.1	224.3	2635.9	9.7	13.4	11.8	22.50	24.75	.625	10.00	.750	15.70
24X11X .625/.750T	79.05	199.7	239.2	2729.6	9.8	13.7	11.5	23.25	24.75	.625	11.00	.750	15.70
24X10X .625/.875T	80.75	201.9	246.2	2801.9	9.8	13.9	11.4	23.75	24.88	.625	10.00	.875	15.78
24X 9X .625/1.125T	85.44	207.2	269.1	2985.9	9.9	14.4	11.1	25.13	25.13	.625	9.00	1.125	15.94
24X13X .625/.875T	89.69	209.1	234.9	3089.8	9.9	14.8	10.5	26.38	24.88	.625	13.00	.875	15.78
24X14X .625/.875T	92.65	211.0	311.2	3175.9	9.9	15.1	10.2	27.25	24.88	.625	14.00	.875	15.78
24X11X .625/1.125T	93.09	212.6	310.5	3218.9	9.9	15.1	10.4	27.38	25.13	.625	11.00	1.125	15.94
24X12X .625/1.125T	96.90	214.9	330.9	3323.2	9.9	15.5	10.0	28.50	25.13	.625	12.00	1.125	15.94
27X 9X .688/1.125T	97.55	250.9	316.8	3990.8	10.8	15.9	12.6	28.69	28.13	.688	9.00	1.125	19.61
24X16X .625/.875T	98.60	214.5	343.3	3333.8	9.9	15.5	9.7	29.00	24.88	.625	16.00	.875	15.78
27X12X .688/.875T	98.80	250.8	327.7	4014.2	10.8	16.0	12.2	29.06	27.88	.688	12.00	.875	19.44
27X13X .688/.875T	101.80	253.6	345.7	4133.3	10.8	16.3	12.0	29.94	27.88	.688	13.00	.875	19.44
27X11X .688/1.125T	105.20	258.0	362.8	4297.8	10.9	16.7	11.8	30.94	28.13	.688	11.00	1.125	19.61
30X13X .750/.875T	115.19	303.9	401.0	5403.6	11.7	17.8	13.5	33.88	30.88	.750	13.00	.875	23.44
27X14X .688/1.125T	116.65	266.3	430.5	4689.3	10.9	17.6	10.9	34.31	28.13	.688	14.00	1.125	19.61
30X11X .750/1.125T	118.59	309.2	419.8	5609.5	11.8	18.1	13.4	34.88	31.13	.750	11.00	1.125	23.63
27X15X .688/1.125T	120.50	268.5	453.5	4807.7	10.9	17.9	10.6	35.44	28.13	.688	15.00	1.125	19.61
30X12X .750/1.125T	122.40	313.0	445.1	5789.8	11.8	18.5	13.0	36.00	31.13	.750	12.00	1.125	23.63
30X16X .750/.875T	124.10	313.0	460.0	5821.9	11.8	18.6	12.7	36.50	30.88	.750	16.00	.875	23.44
27X16X .688/1.125T	124.30	270.6	475.6	4916.7	10.8	18.2	10.3	36.56	28.13	.688	16.00	1.125	19.61
30X14X .750/1.125T	130.05	319.8	434.9	6120.1	11.8	19.1	12.4	38.25	31.13	.750	14.00	1.125	23.63
30X10X .875/1.375T	136.00	337.4	461.3	6187.7	11.7	18.3	13.4	40.00	31.38	.875	10.00	1.375	27.79
33X12X .875/1.125T	144.09	384.3	519.8	7623.5	12.6	19.8	14.7	42.38	34.13	.875	12.00	1.125	30.19
33X10X .875/1.375T	144.94	387.2	521.1	7720.3	12.7	19.9	14.8	42.63	34.38	.875	10.00	1.375	30.41
36X10X .875/1.125T	145.35	424.7	522.6	8787.1	13.5	20.7	16.8	42.75	37.13	.875	10.00	1.125	32.82
33X11X .875/1.375T	149.60	392.8	554.1	7988.3	12.7	20.3	14.4	44.00	34.38	.875	11.00	1.375	30.41
33X14X .875/1.125T	151.74	393.3	573.4	8049.8	12.7	20.5	14.0	44.63	34.13	.875	14.00	1.125	30.19
36X10X .875/1.500T	158.10	446.6	614.0	9792.8	13.7	21.9	15.9	46.50	37.50	.875	10.00	1.500	33.14
36X14X .875/1.375T	172.55	462.6	725.7	10666.8	13.8	23.1	14.7	50.75	37.38	.875	14.00	1.375	33.04
36X15X .875/1.500T	183.60	474.2	805.9	11307.0	13.8	23.8	14.0	54.00	37.50	.875	15.00	1.500	33.14

0.3750 - 3/8 in.

.438 IN. PLATE (AREA= 7.27 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****					SHEAR AREA	
		WT/FI	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WIDTH	FLANGE THICK	THICK	THICK	THICK		
3X 2X .125/ .100T		2.55	11.5	1.6	5.2	.8	.5	3.2	.75	3.19	.125	2.00	.100	.100	.45	.45		
4X 2X .125/ .100T		2.99	16.8	2.3	9.4	1.1	.6	4.1	.88	4.19	.125	2.00	.100	.100	.58	.58		
3X 3X .125/ .100T		3.20	13.3	2.3	7.0	.9	.5	3.1	.94	3.19	.125	3.00	.100	.100	.45	.45		
5X 2X .125/ .100T		3.40	22.5	3.0	15.0	1.3	.7	5.0	1.00	5.19	.125	2.00	.100	.100	.70	.70		
4X 3X .125/ .100T		3.60	18.9	3.1	12.2	1.2	.6	4.0	1.06	4.19	.125	3.00	.100	.100	.58	.58		
5X 3X .125/ .100T		4.05	25.0	4.0	19.4	1.5	.8	4.9	1.06	5.19	.125	3.00	.100	.100	.70	.70		
4X 2X .100/ .313T		4.69	20.0	3.6	14.6	1.3	.7	4.0	1.38	4.31	.100	2.00	.313	.313	.89	.89		
3X 3X .100/ .313T		5.10	15.9	3.6	11.0	1.1	.7	3.1	1.50	3.31	.100	3.00	.313	.313	.78	.78		
5X 2X .100/ .313T		5.30	26.0	4.7	23.1	1.6	.9	4.9	1.56	5.31	.100	2.00	.313	.313	1.08	1.08		
6X 2X .100/ .313T		5.95	32.2	6.0	34.2	1.9	1.1	5.7	1.75	6.31	.100	2.00	.313	.313	1.27	1.27		
7X 2X .100/ .250T		6.15	36.7	6.5	42.5	2.2	1.2	6.5	1.81	7.25	.100	2.00	.250	.250	1.45	1.45		
5X 3X .100/ .313T		6.39	28.5	6.4	29.9	1.8	1.1	4.7	1.88	5.31	.100	3.00	.313	.313	1.08	1.08		
5X 4X .100/ .250T		6.60	28.6	6.7	30.8	1.8	1.1	4.6	1.94	5.25	.100	4.00	.250	.250	1.07	1.07		
7X 3X .100/ .250T		7.00	39.4	8.3	52.5	2.4	1.3	6.4	2.06	7.25	.100	3.00	.250	.250	1.45	1.45		
6X 4X .100/ .250T		7.24	35.1	8.3	44.9	2.2	1.3	5.4	2.13	6.25	.100	4.00	.250	.250	1.26	1.26		
5X 4X .100/ .313T		7.45	30.1	7.9	36.1	2.0	1.2	4.5	2.19	5.31	.100	4.00	.313	.313	1.08	1.08		
7X 3X .100/ .313T		7.65	41.2	9.5	60.0	2.5	1.5	6.3	2.25	7.25	.100	4.00	.313	.313	1.46	1.46		
7X 4X .100/ .250T		7.85	41.5	10.0	62.0	2.5	1.5	6.2	2.31	7.25	.100	4.00	.250	.250	1.45	1.45		
6X 4X .100/ .313T		8.09	36.6	9.8	52.1	2.3	1.4	5.3	2.38	6.31	.100	4.00	.313	.313	1.27	1.27		
7X 4X .100/ .313T		8.70	43.2	11.7	71.3	2.7	1.7	6.1	2.56	7.31	.100	5.00	.313	.313	1.46	1.46		
6X 5X .100/ .313T		9.15	38.0	11.7	60.3	2.5	1.6	5.2	2.69	6.31	.100	5.00	.313	.313	1.27	1.27		
6X 3X .250/ .438T		9.55	37.2	10.7	57.0	2.4	1.5	5.3	2.81	6.44	.250	3.00	.438	.438	1.72	1.72		
7X 5X .100/ .313T		9.79	44.8	13.9	82.3	2.8	1.8	5.9	2.88	7.31	.100	5.00	.313	.313	1.46	1.46		
10.20 37.8		10.20	37.8	11.8	61.3	2.4	1.6	5.2	3.00	6.38	.250	4.00	.375	.375	1.78	1.78		
7X 3X .250/ .438T		10.40	43.7	12.9	78.3	2.8	1.8	6.1	3.06	7.44	.250	3.00	.438	.438	1.97	1.97		
8X 3X .250/ .375T		10.64	49.0	13.9	95.2	3.0	1.9	6.9	3.13	8.38	.250	3.00	.375	.375	2.20	2.20		
10.85 53.9		10.85	53.9	14.6	111.8	3.3	2.1	7.7	3.19	9.31	.250	3.00	.313	.313	2.44	2.44		
8X 4X .250/ .313T		11.05	49.7	14.9	100.2	3.1	2.0	6.7	3.25	8.31	.250	4.00	.313	.313	2.19	2.19		
8X 3X .250/ .438T		11.25	50.4	15.2	103.8	3.1	2.1	6.8	3.31	8.44	.250	3.00	.438	.438	2.22	2.22		
9X 3X .250/ .375T		11.49	55.5	16.1	122.8	3.4	2.2	7.6	3.38	9.38	.250	3.00	.375	.375	2.45	2.45		
10X 3X .250/ .313T		11.70	60.4	16.9	141.7	3.6	2.3	8.4	3.44	10.31	.250	3.00	.313	.313	2.69	2.69		
8X 4X .250/ .375T		11.90	51.2	16.7	111.1	3.2	2.2	6.6	3.50	8.38	.250	4.00	.375	.375	2.28	2.28		
9X 3X .250/ .438T		12.10	57.0	17.7	133.5	3.5	2.3	7.5	3.56	9.44	.250	3.00	.438	.438	2.47	2.47		
10X 3X .250/ .375T		12.34	62.1	18.6	154.7	3.8	2.5	8.3	3.63	10.38	.250	3.00	.375	.375	2.70	2.70		
10X 4X .250/ .313T		12.75	62.9	19.3	162.2	3.8	2.6	8.2	3.75	10.31	.250	4.00	.313	.313	2.69	2.69		
9X 5X .250/ .313T		12.95	58.1	19.0	145.2	3.6	2.4	7.3	3.81	9.31	.250	5.00	.313	.313	2.44	2.44		
8X 5X .250/ .375T		13.19	52.9	19.7	126.6	3.4	2.4	6.4	3.88	8.38	.250	5.00	.375	.375	2.20	2.20		
10X 4X .250/ .375T		13.60	64.7	22.2	178.8	4.0	2.8	8.1	4.00	10.38	.250	4.00	.375	.375	2.70	2.70		
10X 5X .250/ .313T		13.80	64.9	22.8	181.5	4.0	2.8	7.9	4.06	10.31	.250	5.00	.313	.313	2.69	2.69		
9X 5X .250/ .375T		14.04	59.8	22.7	161.4	3.8	2.7	7.1	4.13	9.38	.250	5.00	.375	.375	2.45	2.45		
8X 5X .250/ .438T		14.25	54.2	22.0	138.9	3.5	2.6	6.3	4.19	8.44	.250	5.00	.438	.438	2.22	2.22		
10X 4X .250/ .438T		14.45	66.3	24.5	194.7	4.1	2.9	7.9	4.25	10.44	.250	4.00	.438	.438	2.72	2.72		
10X 5X .250/ .375T		14.89	66.7	25.8	201.1	4.2	3.0	7.8	4.38	10.38	.250	5.00	.375	.375	2.70	2.70		
9X 5X .250/ .438T		15.10	61.2	25.3	177.0	3.9	2.9	7.0	4.44	9.44	.250	5.00	.438	.438	2.47	2.47		
9X 6X .250/ .375T		15.30	61.2	25.9	178.5	3.9	2.9	6.9	4.50	9.38	.250	6.00	.375	.375	2.45	2.45		

0.4375 - 7/16 in.



---

0.4375 - 7/16 in.

.438 IN. PLATE (AREA= 7.27 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	FLANGE THICK	
14X 8X .375/.594T	34.00	109.2	81.2	699.9	6.4	6.4	8.6	10.00	14.59	.375	8.00	.594	5.64
14X 9X .375/.531T	34.10	109.1	51.7	698.9	6.4	6.4	8.6	10.03	14.53	.375	9.00	.531	5.61
16X 6X .438/.656T	34.65	121.8	76.1	795.0	6.7	6.5	10.4	10.19	16.53	.438	6.00	.531	7.43
16X 5X .438/.656T	34.95	122.7	77.8	808.6	6.8	6.6	10.5	10.28	16.66	.438	5.00	.656	7.49
12X10X .375/.594T	35.58	94.7	80.7	567.4	5.7	6.0	7.0	10.44	12.59	.375	10.00	.594	4.89
14X 8X .375/.656T	35.70	110.7	97.8	735.5	6.4	6.6	8.5	10.50	14.66	.375	8.00	.656	5.66
16X 6X .438/.594T	35.90	123.8	81.2	835.0	6.8	6.7	10.3	10.56	16.59	.438	6.00	.594	7.46
14X10X .375/.531T	35.90	110.3	88.3	734.2	6.4	6.7	8.3	10.56	14.53	.375	10.00	.531	5.61
16X 5X .438/.719T	36.01	124.4	81.2	842.8	6.9	6.8	10.4	10.59	16.72	.438	5.00	.719	7.51
14X 9X .375/.594T	36.81	110.7	88.6	739.2	6.4	6.7	8.3	10.59	14.59	.375	9.00	.594	5.64
16X 6X .438/.656T	37.20	125.7	86.2	874.3	6.9	7.0	10.1	10.94	16.66	.438	6.00	.656	7.49
18X 6X .438/.531T	37.68	139.1	88.8	1027.8	7.5	7.4	11.6	11.06	18.53	.438	6.00	.531	8.31
18X 5X .438/.656T	37.94	140.0	89.7	1044.2	7.5	7.5	11.6	11.16	18.66	.438	5.00	.656	8.36
14X10X .375/.594T	38.05	111.9	96.0	776.4	6.5	6.9	8.1	11.19	14.59	.375	10.00	.594	5.64
16X 6X .438/.719T	38.45	127.4	91.3	912.3	7.0	7.2	10.0	11.31	16.72	.438	6.00	.719	7.51
18X 6X .438/.594T	38.90	141.3	94.5	1077.8	7.6	7.6	11.4	11.44	18.59	.438	6.00	.594	8.33
18X 5X .438/.719T	39.00	141.9	94.4	1086.0	7.6	7.7	11.5	11.47	18.72	.438	5.00	.719	8.39
16X 8X .438/.594T	39.95	128.4	97.9	945.7	7.1	7.4	9.7	11.75	16.59	.438	8.00	.594	7.46
16X 9X .438/.531T	40.05	128.3	98.5	945.5	7.0	7.4	9.6	11.78	16.53	.438	9.00	.531	7.43
14X11X .375/.594T	40.85	113.0	103.6	812.1	6.5	7.2	7.8	11.78	14.59	.375	11.00	.594	5.64
18X 7X .438/.594T	40.90	144.2	103.8	1148.2	7.7	8.0	11.1	12.03	18.59	.438	7.00	.594	8.33
18X 8X .438/.531T	41.24	144.3	105.6	1156.7	7.7	8.0	11.0	12.13	18.53	.438	8.00	.531	8.31
16X 6X .438/.719T	41.45	145.3	105.7	1172.1	7.8	8.1	11.1	12.19	18.72	.438	6.00	.719	8.39
16X 7X .438/.531T	41.85	129.9	106.2	991.3	7.1	7.6	9.3	12.31	16.53	.438	10.00	.531	7.43
16X 9X .438/.594T	41.96	130.3	106.2	996.3	7.1	7.6	9.4	12.34	16.59	.438	9.00	.594	7.46
18X 7X .438/.656T	42.40	145.2	109.6	1192.6	7.8	8.2	10.9	12.47	18.66	.438	7.00	.656	8.36
14X11X .375/.656T	42.40	114.3	111.6	852.5	6.6	7.5	7.6	12.47	14.66	.375	11.00	.656	5.66
18X 9X .438/.531T	43.04	146.5	113.9	1215.6	7.8	8.3	10.7	12.66	18.53	.438	9.00	.531	8.31
16X10X .438/.594T	44.00	131.9	114.7	1044.5	7.2	7.9	9.1	12.94	16.59	.438	10.00	.594	7.46
18X 8X .438/.656T	44.64	148.7	120.6	1271.8	7.9	8.6	10.5	13.13	18.66	.438	8.00	.656	8.36
16X11X .438/.594T	46.00	133.3	122.8	1088.5	7.2	8.2	8.9	13.53	16.59	.438	11.00	.594	7.46
16X10X .438/.656T	46.10	133.7	122.9	1094.9	7.2	8.2	8.9	13.56	16.66	.438	10.00	.656	7.49
18X 9X .438/.656T	46.85	150.9	130.9	1338.5	8.0	8.9	10.2	13.78	18.66	.438	9.00	.656	8.36
18X10X .438/.594T	46.95	150.7	131.8	1338.0	8.0	8.9	10.2	13.81	18.59	.438	10.00	.594	8.33
16X10X .438/.719T	48.25	135.3	131.5	1144.0	7.3	8.5	8.7	14.19	16.72	.438	10.00	.719	7.51
16X11X .438/.656T	49.35	135.1	132.1	1142.0	7.3	8.5	8.6	14.22	16.66	.438	11.00	.656	7.49
18X10X .438/.656T	49.10	152.7	141.1	1400.6	8.0	9.2	9.9	14.44	18.66	.438	10.00	.656	8.36
16X11X .438/.719T	50.69	136.6	141.2	1191.4	7.3	8.7	8.4	14.91	16.72	.438	11.00	.719	7.51
18X11X .438/.656T	51.31	154.4	151.2	1459.0	8.1	9.4	9.6	15.09	18.66	.438	11.00	.656	8.36
21X 8X .500/.625T	52.70	180.1	146.3	1781.6	8.8	9.9	12.2	15.50	21.63	.500	8.00	.625	11.03
18X12X .438/.656T	53.55	155.9	161.3	1514.0	8.1	9.7	9.4	15.75	18.66	.438	12.00	.656	8.36
21X 8X .500/.680T	54.40	182.7	154.9	1854.5	8.9	10.2	12.0	16.00	21.69	.500	8.00	.680	11.06
21X 8X .500/.750T	56.10	185.0	163.2	1924.4	9.0	10.4	11.8	16.50	21.75	.500	8.00	.750	11.09
21X10X .500/.625T	56.95	185.4	168.4	1947.4	9.0	10.5	11.6	16.75	21.63	.500	10.00	.625	11.03
21X 9X .500/.750T	58.65	187.8	176.7	2020.1	9.1	10.8	11.4	17.25	21.75	.500	9.00	.750	11.09

0.4375 - 7/16 in.



.438 IN. PLATE (AREA= 7.27 SQ.IN.)

***** BEAM DIMENSIONS *****									
*****									
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH
21X11X .500/ .625T	59.09	187.7	179.6	2025.4	9.1	10.8	11.3	17.38	21.63
21X 8X .500/ .875T	59.50	189.3	180.2	2060.2	9.1	10.9	11.4	17.50	21.88
21X10X .500/ .750T	61.20	190.3	189.8	2108.2	9.1	11.1	11.1	18.00	21.75
21X11X .500/ .688T	61.40	190.2	191.3	2110.5	9.1	11.1	11.0	18.06	21.69
21X13X .500/ .688T	66.10	194.0	215.7	2260.2	9.2	11.7	10.5	19.44	21.69
21X12X .500/ .750T	66.30	194.5	216.2	2271.7	9.2	11.7	10.5	19.50	21.75
21X11X .500/ .875T	68.44	196.6	226.0	2346.4	9.3	11.9	10.4	20.13	21.88
24X 9X .625/ .750T	73.99	231.7	219.5	2839.0	9.9	12.3	12.9	21.75	24.75
24X10X .625/ .750T	76.50	235.0	234.3	2955.4	10.0	12.6	12.6	22.50	24.75
24X11X .625/ .750T	79.05	238.1	248.7	3063.9	10.0	12.9	12.3	23.25	24.75
24X 9X .625/1.125T	85.44	246.7	281.1	3359.2	10.2	13.6	11.9	25.13	25.13
24X13X .625/ .875T	89.69	248.8	307.7	3483.4	10.2	14.0	11.3	26.38	24.88
24X14X .625/ .875T	92.65	251.1	324.7	3584.8	10.2	14.3	11.0	27.25	24.88
24X11X .625/1.125T	93.09	253.0	324.1	3632.6	10.2	14.4	11.2	27.38	25.13
24X12X .625/1.125T	96.90	255.6	345.4	3755.7	10.2	14.7	10.9	28.50	25.13
27X 9X .688/1.125T	97.55	294.2	330.8	4448.9	11.1	15.1	13.4	28.69	28.13
24X16X .625/ .875T	98.60	255.1	358.0	3771.3	10.2	14.8	10.5	29.00	24.88
27X12X .688/ .875T	98.80	294.2	342.0	4478.3	11.1	15.2	13.1	29.06	27.88
27X13X .688/ .875T	101.80	297.4	360.6	4615.3	11.1	15.5	12.8	29.94	27.88
27X11X .688/1.125T	105.20	302.3	378.6	4802.1	11.2	15.9	12.7	30.94	28.13
30X13X .750/ .875T	115.19	351.5	418.1	5980.5	12.1	17.0	14.3	33.88	30.88
27X14X .688/1.125T	116.55	311.7	448.9	5255.6	11.2	16.9	11.7	34.31	28.13
30X11X .750/1.125T	118.59	357.4	437.8	6211.0	12.1	17.4	14.2	34.88	31.13
27X15X .688/1.125T	120.50	314.3	472.8	5393.7	11.2	17.2	11.4	35.44	28.13
30X12X .750/1.125T	122.40	361.7	463.9	6415.9	12.2	17.7	13.8	36.00	31.13
30X16X .750/ .875T	124.10	361.7	473.1	6455.3	12.1	17.8	13.5	36.50	30.88
27X16X .688/1.125T	124.30	316.7	495.8	5520.9	11.2	17.4	11.1	36.56	28.13
30X14X .750/1.125T	130.05	369.3	515.5	6792.0	12.2	18.4	13.2	38.25	31.13
30X10X .875/1.375T	136.00	385.4	480.6	6805.6	12.0	17.7	14.2	40.00	31.38
33X12X .875/1.125T	144.09	436.4	540.8	8346.3	13.0	19.1	15.4	42.38	34.13
33X10X .875/1.375T	144.94	439.5	542.4	8452.7	13.0	19.2	15.6	42.63	34.38
36X10X .875/1.125T	145.35	479.8	543.8	9576.1	13.8	20.0	17.6	42.75	37.13
33X11X .875/1.375T	149.60	445.6	576.5	8751.2	13.1	19.6	15.2	44.00	34.38
33X14X .875/1.125T	151.74	446.3	536.3	8822.8	13.0	19.8	14.8	44.63	34.13
36X10X .875/1.500T	158.10	503.7	638.4	10681.6	14.1	21.2	16.7	46.50	37.50
36X14X .875/1.375T	172.55	521.3	753.6	11652.6	14.2	22.4	15.5	50.75	37.38
36X15X .875/1.500T	183.60	533.9	836.5	12363.4	14.2	23.2	14.8	54.00	37.50

0.4375 - 7/16 in.

\*\*\*\*\* BEAM DIMENSIONS \*\*\*\*\*

0.5000 - 1/2 in.



500 IN. PLATE (AREA= 9.50 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	THICK	AREA			
8X 6X .250/.438T	15.74	69.4	25.8	168.3	3.5	2.4	6.5	4.63	8.44	.250	6.00	.438	2.24			
10X 5X .250/.438T	15.95	85.4	29.3	238.5	4.1	2.8	8.1	4.69	10.44	.250	5.00	.438	2.74			
10X 6X .250/.375T	16.15	85.5	29.9	241.1	4.1	2.8	8.1	4.75	10.38	.250	6.00	.375	2.72			
9X 7X .250/.375T	16.59	78.2	29.7	212.4	3.8	2.7	7.2	4.88	9.38	.250	7.00	.375	2.47			
8X 7X .250/.438T	17.20	70.8	29.3	185.1	3.6	2.6	6.3	5.06	8.44	.250	7.00	.438	2.24			
10X 7X .250/.375T	17.44	87.3	33.6	263.9	4.2	3.0	7.9	5.13	10.36	.250	7.00	.375	2.72			
9X 7X .250/.438T	18.05	80.0	33.4	234.4	4.0	2.9	7.0	5.31	9.44	.250	7.00	.438	2.49			
12X 4X .313/.563T	18.23	86.2	31.3	254.0	4.1	2.9	8.1	5.38	10.56	.313	4.00	.563	3.46			
12X 4X .313/.406T	18.29	99.1	32.5	315.9	4.6	3.2	9.7	5.38	12.41	.313	4.00	.406	4.04			
8X 8X .250/.438T	18.70	72.0	32.7	200.9	3.7	2.8	6.1	5.50	8.44	.250	8.00	.438	2.24			
10X 7X .250/.438T	18.90	89.2	37.7	289.8	4.4	3.2	7.7	5.56	10.44	.250	7.00	.438	2.74			
12X 4X .313/.469T	19.14	101.2	35.2	339.1	4.7	3.3	9.6	5.63	12.47	.313	4.00	.469	4.06			
9X 8X .250/.438T	19.55	81.3	37.2	253.9	4.1	3.1	6.8	5.75	9.44	.250	8.00	.438	2.49			
12X 5X .313/.406T	19.65	102.1	37.1	351.3	4.8	3.4	9.5	5.78	12.41	.313	5.00	.406	4.04			
12X 4X .313/.531T	19.99	103.3	38.0	362.1	4.9	3.5	9.5	5.88	12.53	.313	4.00	.531	4.08			
10X 8X .250/.438T	20.40	90.6	41.9	313.5	4.5	3.5	7.5	6.00	10.44	.250	8.00	.438	2.74			
12X 5X .313/.469T	20.71	104.4	40.6	379.0	4.9	3.6	9.3	6.09	12.47	.313	5.00	.469	4.06			
12X 6X .313/.406T	21.05	104.7	41.7	385.1	5.0	3.7	9.2	6.19	12.41	.313	6.00	.406	4.04			
12X 5X .313/.531T	21.79	106.4	44.1	406.1	5.1	3.8	9.2	6.41	12.53	.313	5.00	.531	4.08			
12X 6X .313/.469T	22.30	107.0	45.9	416.5	5.1	3.9	9.1	6.56	12.47	.313	6.00	.469	4.06			
12X 7X .313/.406T	22.41	106.9	46.4	417.8	5.1	3.9	9.0	6.59	12.41	.313	7.00	.406	4.04			
12X 6X .313/.531T	23.60	109.0	50.1	447.2	5.2	4.1	8.9	6.94	12.53	.313	6.00	.531	4.08			
12X 7X .313/.469T	23.90	109.1	51.3	452.3	5.2	4.1	8.8	7.03	12.47	.313	7.00	.469	4.06			
14X 4X .375/.469T	24.24	119.7	46.2	499.3	5.5	4.2	10.8	7.13	14.47	.375	4.00	.469	5.61			
14X 4X .375/.531T	25.09	121.9	49.4	528.2	5.6	4.3	10.7	7.38	14.53	.375	4.00	.531	5.64			
12X 7X .313/.531T	25.40	111.0	56.1	485.7	5.4	4.4	8.7	7.47	12.53	.313	7.00	.531	4.08			
12X 8X .313/.469T	25.50	110.9	56.6	486.1	5.3	4.4	8.6	7.50	12.47	.313	8.00	.469	4.06			
14X 4X .375/.594T	25.94	124.0	52.5	556.6	5.7	4.5	10.6	7.63	14.59	.375	4.00	.594	5.66			
12X 5X .375/.656T	26.45	110.3	52.9	470.6	5.2	4.3	8.9	7.78	12.66	.375	5.00	.656	4.94			
14X 4X .375/.531T	26.79	125.9	55.6	584.4	5.8	4.6	10.5	7.88	14.66	.375	4.00	.531	5.69			
14X 5X .375/.531T	26.89	125.6	56.3	584.4	5.8	4.7	10.4	7.91	14.53	.375	5.00	.531	5.64			
12X 8X .313/.531T	27.20	112.8	62.1	522.1	5.5	4.6	8.4	8.00	12.53	.313	8.00	.531	4.08			
14X 6X .375/.531T	28.70	128.7	63.3	637.6	6.0	5.0	10.1	8.44	14.53	.375	6.00	.531	5.64			
14X 5X .375/.656T	29.00	129.7	64.1	650.3	6.0	5.0	10.1	8.53	14.66	.375	5.00	.656	5.69			
14X 7X .375/.469T	29.00	128.9	64.5	643.8	6.0	5.0	10.0	8.53	14.47	.375	7.00	.469	5.61			
12X 9X .313/.531T	29.00	114.2	68.1	555.9	5.6	4.9	8.2	8.53	12.53	.313	9.00	.531	4.08			
14X 6X .375/.594T	29.95	130.8	67.9	674.7	6.1	5.2	9.9	8.81	14.59	.375	6.00	.594	5.66			
14X 7X .375/.531T	30.50	131.2	70.1	686.7	6.1	5.2	9.8	8.97	14.53	.375	7.00	.531	5.64			
14X 8X .375/.469T	30.60	131.1	70.6	687.0	6.1	5.2	9.7	9.00	14.47	.375	8.00	.469	5.61			
12X 10X .313/.531T	30.80	115.5	74.1	587.9	5.6	5.1	7.9	9.06	12.53	.313	10.00	.531	4.08			
14X 6X .375/.656T	31.25	132.7	72.6	711.2	6.2	5.4	9.8	9.19	14.66	.375	6.00	.656	5.69			
14X 7X .375/.594T	31.99	133.3	75.6	727.8	6.2	5.5	9.6	9.41	14.59	.375	7.00	.594	5.66			
14X 8X .375/.531T	32.30	133.4	77.0	733.7	6.2	5.5	9.5	9.50	14.53	.375	8.00	.531	5.64			
16X 5X .438/.531T	32.84	146.1	70.7	811.3	6.5	5.6	11.5	9.66	16.53	.438	5.00	.531	7.46			
16X 5X .438/.594T	33.90	148.5	75.1	852.1	6.6	5.7	11.4	9.97	16.59	.438	5.00	.594	7.49			

0.5000 - 1/2 in.

500 IN. PLATE (AREA= 9.50 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK						
14X 8X .375/.594T	34.00	135.5	93.4	6.3	5.7	9.3	10.00	14.59	.375	8.00	.594						
14X 9X .375/.531T	34.10	135.3	93.8	6.3	5.8	9.3	10.03	14.53	.375	9.00	.531						
16X 6X .438/.531T	34.65	149.7	78.5	6.7	5.9	11.2	10.19	16.53	.438	6.00	.531						
16X 5X .438/.656T	34.95	150.7	79.4	6.7	5.9	11.2	10.28	16.66	.438	5.00	.656						
12X10X .375/.594T	35.50	117.9	82.7	6.3	5.4	7.7	10.44	12.59	.375	10.00	.594						
14X 8X .375/.656T	35.70	137.3	89.4	6.4	6.0	9.2	10.50	14.66	.375	8.00	.656						
16X 6X .438/.594T	35.90	152.1	83.7	6.8	6.1	11.0	10.56	16.59	.438	6.00	.594						
14X10X .375/.531T	35.90	136.9	90.7	6.4	6.0	9.0	10.56	14.53	.375	10.00	.531						
16X 5X .438/.719T	36.01	152.8	83.7	6.8	6.1	11.1	10.59	16.72	.438	5.00	.719						
14X 9X .375/.594T	36.01	137.3	90.9	6.4	6.0	9.1	10.59	14.59	.375	9.00	.594						
16X 6X .438/.656T	37.20	154.4	88.9	6.9	6.3	10.9	10.94	16.66	.438	6.00	.656						
18X 6X .438/.531T	37.60	170.2	91.7	7.4	6.7	12.4	11.06	18.53	.438	6.00	.531						
18X 5X .438/.656T	37.94	171.3	92.7	7.5	6.7	12.4	11.16	18.66	.438	5.00	.656						
14X10X .375/.594T	38.05	138.9	98.6	6.5	6.3	8.8	11.19	14.59	.375	10.00	.594						
16X 6X .438/.719T	38.45	156.5	94.1	7.0	6.5	10.8	11.31	16.72	.438	6.00	.719						
18X 6X .438/.594T	38.90	172.9	97.6	7.5	6.9	12.2	11.44	18.59	.438	6.00	.594						
18X 5X .438/.719T	39.00	173.6	97.5	7.6	6.9	12.3	11.47	18.72	.438	5.00	.719						
16X 8X .438/.594T	39.95	157.8	100.8	7.0	6.7	10.4	11.75	16.59	.438	8.00	.594						
16X 9X .438/.531T	40.05	157.6	101.5	7.0	6.7	10.4	11.78	16.53	.438	9.00	.531						
14X11X .375/.594T	40.05	140.3	106.3	6.5	6.5	8.6	11.78	14.59	.375	11.00	.594						
18X 7X .438/.594T	40.90	176.4	107.1	7.2	7.2	11.9	12.03	18.59	.438	7.00	.594						
18X 8X .438/.531T	41.24	176.6	108.9	7.7	7.3	11.8	12.13	18.53	.438	8.00	.531						
18X 6X .438/.719T	41.45	177.8	109.1	7.7	7.3	11.9	12.19	18.72	.438	6.00	.719						
16X10X .438/.531T	41.85	159.7	109.3	7.1	6.9	10.1	12.31	16.53	.438	10.00	.531						
16X 9X .438/.594T	41.96	160.1	109.4	7.1	6.9	10.2	12.34	16.59	.438	9.00	.594						
18X 7X .438/.656T	42.40	177.8	113.2	7.8	7.5	11.7	12.47	18.66	.438	7.00	.656						
14X11X .375/.656T	42.40	142.0	114.6	6.6	6.8	8.4	12.47	14.66	.375	11.00	.656						
18X 9X .438/.531T	43.04	179.3	117.5	7.8	7.5	11.5	12.66	18.53	.438	9.00	.531						
16X10X .438/.594T	44.00	162.1	118.1	7.2	7.2	9.9	12.94	16.59	.438	10.00	.594						
18X 8X .438/.656T	44.64	181.9	124.4	7.9	7.8	11.4	13.13	18.66	.438	8.00	.656						
16X11X .438/.594T	46.00	163.8	126.5	7.3	7.4	9.6	13.53	16.59	.438	11.00	.594						
16X10X .438/.656T	46.10	164.2	126.6	7.3	7.5	9.7	13.56	16.66	.438	10.00	.656						
18X 9X .438/.594T	46.55	184.6	135.0	8.0	8.1	11.1	13.70	18.66	.438	9.00	.594						
18X10X .438/.594T	46.95	184.4	135.9	8.0	8.1	11.0	13.81	18.59	.438	10.00	.594						
16X10X .433/.719T	48.25	166.3	135.5	7.4	7.7	9.5	14.19	16.72	.438	10.00	.719						
16X11X .438/.656T	48.35	166.0	136.1	7.4	7.7	9.4	14.22	16.66	.438	11.00	.656						
18X10X .438/.656T	49.10	186.9	145.5	8.1	8.4	10.8	14.44	18.66	.438	10.00	.656						
16X11X .438/.719T	50.69	167.9	145.5	7.4	8.0	9.2	14.91	16.72	.438	11.00	.719						
18X11X .438/.656T	51.31	188.9	155.9	8.2	8.7	10.5	15.09	18.66	.438	11.00	.656						
21X 8X .500/.625T	52.70	217.7	151.4	8.9	9.1	13.1	15.50	21.63	.500	8.00	.625						
18X12X .438/.656T	53.55	190.7	166.3	8.2	8.9	10.2	15.75	18.66	.438	12.00	.656						
21X 8X .500/.680T	54.40	220.7	161.3	9.0	9.3	12.9	16.00	21.69	.500	8.00	.680						
21X 8X .500/.750T	56.10	223.5	168.9	9.1	9.6	12.7	16.50	21.75	.500	8.00	.750						
21X10X .500/.625T	56.95	224.0	174.2	9.1	9.7	12.4	16.75	21.63	.500	10.00	.625						
21X 9X .500/.750T	58.65	226.9	182.8	9.2	9.9	12.3	17.25	21.75	.500	9.00	.750						

0.5000 - 1/2 in.



0.500 IN. PLATE (AREA= 9.50 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	226.7	185.8	2299.6	9.2	18.0	12.2	17.38	21.63	.500	11.00	.625	11.07
21X 8X .500/.875T	59.50	228.6	186.5	2238.5	9.2	10.1	12.3	17.50	21.88	.500	8.00	.875	11.19
21X10X .500/.750T	61.20	229.8	196.3	2355.6	9.3	10.3	12.0	18.00	21.75	.500	10.00	.750	11.13
21X11X .500/.688T	61.40	229.7	197.9	2358.7	9.3	10.3	11.9	18.06	21.69	.500	11.00	.688	11.10
21X13X .500/.688T	66.10	234.2	223.0	2535.1	9.4	10.8	11.4	19.44	21.69	.500	13.00	.688	11.10
21X12X .500/.750T	66.30	234.8	223.6	2548.2	9.4	10.9	11.4	19.50	21.75	.500	12.00	.750	11.13
21X11X .500/.875T	68.44	237.3	233.8	2635.5	9.4	11.1	11.3	20.13	21.88	.500	11.00	.875	11.19
24X 9X .625/.750T	73.95	274.7	227.9	3145.2	10.0	11.4	13.8	21.75	24.75	.625	9.00	.750	15.78
24X10X .625/.750T	76.50	278.6	243.2	3278.5	10.1	11.8	13.5	22.50	24.75	.625	10.00	.750	15.78
24X11X .625/.750T	79.05	282.1	258.1	3403.1	10.2	12.1	13.2	23.25	24.75	.625	11.00	.750	15.78
24X10X .625/.375T	80.75	285.0	266.8	3497.6	10.3	12.3	13.1	23.75	24.88	.625	10.00	.875	15.86
24X 9X .625/1.125T	85.44	292.0	291.8	3740.9	10.4	12.8	12.8	25.13	25.13	.625	9.00	1.125	16.82
24X13X .625/.875T	89.69	294.6	319.1	3887.7	10.4	13.2	12.2	26.38	24.88	.625	13.00	.875	15.86
24X14X .625/.875T	92.65	297.2	336.6	4006.0	10.4	13.5	11.9	27.25	24.88	.625	14.00	.875	15.86
24X11X .625/1.125T	93.03	299.3	336.3	4059.0	10.5	13.6	12.1	27.38	25.13	.625	11.00	1.125	16.82
24X12X .625/1.125T	96.90	302.4	358.3	4283.1	10.5	13.9	11.7	28.50	25.13	.625	12.00	1.125	16.82
27X 9X .688/1.125T	97.55	344.1	343.7	4922.8	11.4	14.3	14.3	28.69	28.13	.688	9.00	1.125	19.70
24X16X .625/.875T	98.60	301.6	371.1	4224.6	10.5	14.0	11.4	29.00	24.88	.625	16.00	.875	15.86
27X12X .688/.875T	98.80	344.1	355.0	4959.1	11.3	14.4	14.0	29.06	27.88	.688	12.00	.875	19.53
27X13X .688/.875T	101.80	347.7	374.3	5115.8	11.4	14.7	13.7	29.94	27.88	.688	13.00	.875	19.53
27X11X .688/1.125T	105.20	353.3	393.1	5327.4	11.5	15.1	13.6	30.94	28.13	.688	11.00	1.125	19.70
30X13X .750/.875T	115.19	406.4	434.0	6585.8	12.3	16.2	15.2	33.88	30.88	.750	13.00	.875	23.54
27X14X .688/1.125T	116.65	364.1	465.8	5850.3	11.6	16.1	12.6	34.31	28.13	.688	14.00	1.125	19.70
30X11X .750/1.125T	118.59	412.9	454.5	6843.6	12.4	16.6	15.1	34.88	31.13	.750	11.00	1.125	23.72
27X15X .688/1.125T	120.50	367.0	490.6	6010.8	11.6	16.4	12.3	35.44	28.13	.688	15.00	1.125	19.70
30X12X .750/1.125T	122.40	417.8	481.6	7075.8	12.5	16.9	14.7	36.00	31.13	.750	12.00	1.125	23.72
30X16X .750/.875T	124.10	417.9	497.0	7123.6	12.4	17.0	14.3	36.50	30.88	.750	16.00	.875	23.54
27X16X .688/1.125T	124.30	369.7	514.4	6158.6	11.6	16.7	12.0	36.56	28.13	.688	16.00	1.125	19.70
30X14X .750/1.125T	130.05	426.3	534.8	7503.4	12.5	17.6	14.0	38.25	31.13	.750	14.00	1.125	23.72
30X10X .875/1.375T	136.00	440.8	499.1	7462.2	12.3	16.9	15.0	40.00	31.38	.875	10.00	1.375	27.90
33X12X .875/1.125T	144.09	496.4	561.2	9121.4	13.3	18.4	16.3	42.38	34.13	.875	12.00	1.125	30.30
33X10X .875/1.375T	144.94	499.7	563.0	9234.3	13.3	18.5	16.4	42.63	34.38	.875	10.00	1.375	30.52
36X10X .875/1.125T	145.35	543.3	564.5	10418.1	14.1	19.2	18.5	42.75	37.13	.875	10.00	1.125	32.93
33X11X .875/1.375T	149.60	506.6	598.2	9567.0	13.4	18.9	16.0	44.00	34.38	.875	11.00	1.375	30.52
33X14X .875/1.125T	151.74	507.3	618.4	9650.2	13.4	19.0	15.6	44.63	34.13	.875	14.00	1.125	30.30
36X10X .875/1.500T	158.10	569.6	662.1	11635.3	14.4	20.4	17.6	46.50	37.50	.875	10.00	1.500	33.25
36X14X .875/1.375T	172.55	588.9	780.8	12716.1	14.5	21.6	16.3	50.75	37.38	.875	14.00	1.375	33.15
36X15X .875/1.500T	183.60	602.7	866.5	13507.2	14.6	22.4	15.6	54.00	37.50	.875	15.00	1.500	33.25

0.5000 - 1/2 in.

563 IN. PLATE (AREA= 12.02 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .125/ .100T	2.55	13.4	1.8	5.8	.7	.4	3.3	.75	3.19	.125	2.00	.100	.47
4X 2X .125/ .100T	2.99	20.5	2.4	10.2	.9	.5	4.3	.86	4.19	.125	2.00	.100	.59
3X 3X .125/ .100T	3.20	16.2	2.4	7.8	.8	.5	3.3	.94	3.19	.125	3.00	.100	.47
5X 2X .125/ .100T	3.40	28.5	3.1	16.2	1.1	.6	5.2	1.00	5.19	.125	2.00	.100	.72
4X 3X .125/ .100T	3.60	24.0	3.2	13.3	1.0	.6	4.2	1.06	4.19	.125	3.00	.100	.59
5X 3X .125/ .100T	4.05	32.7	4.1	21.0	1.3	.6	5.1	1.19	5.19	.125	3.00	.100	.72
4X 2X .100/ .100T	4.69	26.1	3.8	16.1	1.1	.6	4.3	1.30	4.31	.100	2.00	.313	.92
3X 3X .100/ .100T	5.10	20.8	3.8	12.3	1.0	.6	3.3	1.50	3.31	.100	3.00	.313	.73
5X 2X .100/ .100T	5.30	35.0	4.9	25.3	1.4	.7	5.2	1.56	5.31	.100	2.00	.313	1.10
6X 2X .100/ .100T	5.95	44.5	6.2	37.4	1.6	.8	6.0	1.75	6.31	.100	2.00	.313	1.29
7X 2X .100/ .100T	6.15	51.1	6.7	46.4	1.8	.9	6.9	1.81	7.25	.100	2.00	.250	1.47
5X 3X .100/ .100T	6.39	39.5	6.6	33.1	1.5	.9	5.0	1.88	5.31	.100	3.00	.313	1.10
5X 4X .100/ .100T	6.60	39.9	6.9	34.1	1.6	.9	5.0	1.94	5.25	.100	4.00	.250	1.09
7X 3X .100/ .100T	7.00	56.1	8.5	57.7	2.0	1.0	6.8	2.06	7.25	.100	3.00	.250	1.47
6X 4X .100/ .100T	7.24	49.9	8.6	49.8	1.9	1.0	5.8	2.13	6.25	.100	4.00	.250	1.20
5X 4X .100/ .100T	7.45	42.7	8.2	40.3	1.7	.9	4.9	2.19	5.31	.100	4.00	.313	1.10
7X 4X .100/ .100T	7.65	59.3	9.8	66.3	2.2	1.1	6.8	2.25	7.31	.100	3.00	.313	1.40
6X 4X .100/ .100T	7.85	60.0	10.3	68.6	2.2	1.1	5.8	2.38	6.31	.100	4.00	.250	1.47
8X 4X .100/ .100T	8.09	52.9	10.1	58.1	2.0	1.1	5.8	2.38	6.31	.100	4.00	.313	1.29
7X 5X .100/ .100T	8.70	63.2	12.0	79.5	2.3	1.3	6.6	2.56	7.31	.100	4.00	.313	1.48
6X 5X .100/ .100T	9.15	55.7	12.0	67.9	2.1	1.2	5.7	2.69	6.31	.100	5.00	.313	1.29
8X 3X .250/ .430T	9.55	54.1	11.0	64.2	2.1	1.2	5.8	2.91	6.44	.250	3.00	.430	1.75
7X 5X .100/ .100T	9.79	66.3	14.3	92.6	2.5	1.4	6.5	2.68	7.31	.100	5.00	.313	1.48
6X 4X .250/ .375T	10.20	55.3	12.2	69.4	2.1	1.3	5.7	3.00	6.38	.250	4.00	.375	1.74
7X 3X .250/ .430T	10.40	64.3	13.3	88.2	2.4	1.4	6.6	3.06	7.44	.250	3.00	.430	2.00
8X 3X .250/ .375T	10.64	72.4	14.3	106.9	2.7	1.5	7.5	3.13	8.38	.250	3.00	.375	2.24
9X 3X .250/ .313T	10.85	79.7	15.1	125.2	2.9	1.6	8.3	3.19	9.31	.250	3.00	.313	2.47
8X 4X .250/ .313T	11.05	73.6	15.4	112.8	2.7	1.5	7.3	3.25	8.31	.250	4.00	.313	2.22
9X 3X .250/ .430T	11.25	74.7	15.7	117.0	2.8	1.6	7.4	3.31	8.44	.250	3.00	.430	2.25
10X 3X .250/ .375T	11.49	82.6	16.7	138.1	3.0	1.7	8.3	3.30	9.38	.250	3.00	.375	2.49
8X 4X .250/ .313T	11.70	89.9	17.5	159.1	3.2	1.8	9.1	3.44	10.31	.250	3.00	.313	2.72
9X 3X .250/ .375T	11.90	76.3	17.3	125.9	2.8	1.7	7.3	3.50	8.38	.250	4.00	.375	2.24
10X 3X .250/ .430T	12.10	85.2	18.3	150.8	3.1	1.8	8.2	3.56	9.44	.250	3.00	.430	2.50
10X 4X .250/ .375T	12.34	92.8	19.2	174.4	3.3	1.9	9.1	3.63	10.38	.250	3.00	.375	2.74
10X 4X .250/ .313T	12.75	94.3	20.5	183.4	3.4	1.9	8.9	3.75	10.31	.250	4.00	.313	2.72
9X 5X .250/ .313T	12.95	87.3	20.7	165.1	3.2	1.9	8.0	3.81	9.31	.250	5.00	.313	2.47
8X 5X .250/ .375T	13.19	79.5	20.3	144.9	3.0	1.8	7.1	3.88	8.38	.250	5.00	.375	2.24
10X 4X .250/ .375T	13.60	97.5	23.0	203.4	3.6	2.1	8.9	4.00	10.38	.250	4.00	.375	2.74
10X 5X .250/ .313T	13.80	97.8	23.6	206.7	3.6	2.1	8.8	4.06	10.31	.250	5.00	.313	2.72
8X 5X .250/ .430T	14.04	90.2	23.4	184.9	3.4	2.0	7.9	4.13	9.38	.250	5.00	.375	2.49
10X 4X .250/ .430T	14.25	81.9	22.7	160.1	3.1	2.0	7.0	4.19	8.44	.250	5.00	.430	2.25
10X 4X .250/ .375T	14.45	100.2	25.4	222.6	3.7	2.2	8.8	4.25	10.44	.250	4.00	.430	2.75
10X 5X .250/ .375T	14.89	101.0	26.6	230.7	3.7	2.3	8.7	4.36	10.38	.250	5.00	.375	2.74
9X 5X .250/ .430T	15.10	92.9	26.2	204.2	3.5	2.2	7.8	4.44	9.44	.250	5.00	.430	2.50
9X 6X .250/ .375T	15.30	92.9	26.7	206.3	3.5	2.2	7.7	4.50	9.38	.250	6.00	.375	2.49

0.5625 - 9/16 in.



.563 IN. PLATE (AREA= 12.02 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	WEB THICK					FLANGE WIDTH	THICK		
8X 6X .250/.438T	15.74	84.3	26.2	180.0	3.3	2.1	6.9	8.44	.250	6.00	.438	2.25
10X 5X .250/.438T	15.95	103.8	29.7	254.1	3.9	2.4	8.6	10.44	.250	5.00	.438	2.75
10X 6X .250/.375T	16.15	103.9	30.4	257.1	3.9	2.5	8.5	10.38	.250	6.00	.375	2.74
9X 7X .250/.375T	16.59	95.1	30.1	227.2	3.7	2.4	7.6	9.38	.250	7.00	.375	2.49
8X 7X .250/.438T	17.20	86.2	29.7	199.7	3.4	2.3	6.7	8.44	.250	7.00	.438	2.25
10X 7X .250/.375T	17.44	106.3	34.1	282.4	4.1	2.7	8.3	10.38	.250	7.00	.375	2.74
9X 7X .250/.438T	18.05	97.6	33.9	251.7	3.8	2.6	7.4	9.44	.250	7.00	.438	2.50
10X 4X .313/.563T	18.29	104.5	31.8	271.5	3.9	2.6	8.5	10.56	.313	4.00	.563	3.48
12X 4X .313/.406T	18.29	120.0	33.1	336.6	4.4	2.8	10.2	12.41	.313	4.00	.406	4.06
8X 8X .250/.438T	18.70	87.8	33.1	216.6	3.5	2.5	6.5	8.44	.250	8.00	.438	2.25
10X 7X .250/.438T	18.90	108.9	38.2	311.3	4.2	2.9	8.1	10.44	.250	7.00	.438	2.75
12X 4X .313/.469T	19.14	122.8	35.9	362.0	4.5	2.9	10.1	12.47	.313	4.00	.469	4.08
9X 8X .250/.438T	19.55	99.3	37.8	273.7	3.9	2.8	7.2	9.44	.250	8.00	.438	2.50
12X 5X .313/.406T	19.65	124.0	37.8	375.5	4.6	3.0	9.9	12.41	.313	5.00	.406	4.06
12X 4X .313/.531T	19.99	125.4	38.7	387.4	4.7	3.1	10.0	12.53	.313	4.00	.531	4.10
10X 8X .250/.438T	20.40	110.8	42.5	338.1	4.3	3.1	8.0	10.44	.250	8.00	.438	2.75
12X 5X .313/.469T	20.71	126.9	41.3	406.1	4.7	3.2	9.8	12.47	.313	5.00	.469	4.08
12X 6X .313/.406T	21.05	127.3	42.5	413.0	4.8	3.2	9.7	12.41	.313	6.00	.406	4.06
12X 5X .313/.531T	21.79	129.5	44.9	436.2	4.9	3.4	9.7	12.53	.313	5.00	.531	4.10
12X 6X .313/.469T	22.30	130.2	46.7	447.9	4.9	3.4	9.6	12.47	.313	6.00	.469	4.08
12X 7X .313/.406T	22.41	130.1	47.2	449.5	4.9	3.5	9.5	12.41	.313	7.00	.406	4.06
12X 6X .313/.531T	23.60	132.7	51.0	482.3	5.0	3.6	9.5	12.53	.313	6.00	.531	4.10
12X 7X .313/.469T	23.90	132.9	52.2	488.2	5.1	3.7	9.4	12.47	.313	7.00	.469	4.08
14X 4X .375/.469T	24.24	144.8	47.3	535.7	5.3	3.7	11.3	14.47	.375	4.00	.469	5.64
14X 4X .375/.531T	25.09	147.6	50.5	567.6	5.4	3.8	11.2	14.53	.375	4.00	.531	5.66
12X 7X .313/.531T	25.40	135.4	57.1	525.9	5.2	3.9	9.2	12.53	.313	7.00	.531	4.10
12X 8X .313/.469T	25.50	135.2	57.6	526.4	5.2	3.9	9.1	12.47	.313	8.00	.469	4.08
14X 4X .375/.594T	25.94	150.2	53.7	599.0	5.5	4.0	11.2	14.59	.375	4.00	.594	5.68
12X 5X .375/.656T	26.45	134.0	54.0	508.9	5.1	3.8	9.4	12.66	.375	5.00	.656	4.96
14X 4X .375/.656T	26.79	152.5	56.8	630.0	5.6	4.1	11.1	14.66	.375	4.00	.656	5.71
14X 5X .375/.531T	26.89	152.2	57.5	630.1	5.6	4.1	11.0	14.53	.375	5.00	.531	5.66
12X 8X .313/.531T	27.20	137.7	63.2	567.4	5.3	4.1	9.0	12.53	.313	8.00	.531	4.10
14X 6X .375/.531T	28.70	156.1	64.6	689.8	5.8	4.4	10.7	14.53	.375	6.00	.531	5.66
14X 5X .375/.656T	29.00	157.3	65.5	693.8	5.9	4.5	10.7	14.66	.375	5.00	.656	5.71
14X 7X .375/.469T	29.00	156.4	65.9	696.9	5.8	4.5	10.6	14.47	.375	7.00	.469	5.64
12X 9X .313/.531T	29.00	139.5	69.3	606.3	5.4	4.3	8.7	12.53	.313	9.00	.531	4.10
14X 6X .375/.594T	29.95	158.7	69.4	731.4	5.9	4.6	10.5	14.59	.375	6.00	.594	5.68
14X 7X .375/.531T	30.50	159.3	71.6	745.2	6.0	4.7	10.4	14.53	.375	7.00	.531	5.66
14X 8X .375/.469T	30.60	159.1	72.1	745.8	6.0	4.7	10.3	14.47	.375	8.00	.469	5.64
12X 10X .313/.531T	30.80	141.2	75.4	643.4	5.5	4.6	8.5	12.53	.313	10.00	.531	4.10
14X 6X .375/.656T	31.25	161.1	74.1	772.7	6.0	4.8	10.4	14.66	.375	6.00	.656	5.71
14X 7X .375/.594T	31.99	161.9	77.2	791.6	6.1	4.9	10.3	14.59	.375	7.00	.594	5.68
14X 8X .375/.531T	32.30	162.0	78.6	798.7	6.1	4.9	10.2	14.53	.375	8.00	.531	5.66
16X 5X .438/.531T	32.84	176.2	72.5	877.6	6.4	5.0	12.1	16.53	.438	5.00	.531	7.49
16X 5X .438/.594T	33.90	179.1	77.0	923.2	6.5	5.2	12.0	16.59	.438	5.00	.594	7.51

0.5625 - 9/16 in.

-----.563 IN. PLATE (AREA= 12.02 SQ.IN.)-----

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE		WIDTH	THICK	AREA		
14X 8X .375/.594T	34.00	164.6	85.1	850.1	6.2	5.2	10.0	10.00	14.59	.375	.375	8.00	.594	5.60		
14X 9X .375/.531T	34.10	164.4	85.6	849.2	6.2	5.2	9.9	10.03	14.53	.375	.375	9.00	.531	5.66		
16X 6X .438/.531T	34.65	180.6	80.5	951.3	6.5	5.3	11.8	10.19	16.53	.438	.438	6.00	.531	7.49		
16X 5X .438/.556T	34.95	181.8	81.4	968.1	6.6	5.3	11.9	10.28	16.66	.438	.438	5.00	.556	7.54		
12X10X .375/.594T	35.50	143.8	84.4	699.4	5.6	4.9	8.3	10.44	12.59	.375	.375	10.00	.594	4.93		
14X 8X .375/.556T	35.70	166.9	81.3	898.2	6.3	5.4	9.8	10.50	14.66	.375	.375	8.00	.556	5.71		
16X 6X .438/.594T	35.90	183.5	85.8	1002.7	6.7	5.5	11.7	10.56	16.59	.438	.438	6.00	.594	7.51		
14X10X .375/.531T	35.90	166.4	82.5	897.4	6.3	5.4	9.7	10.56	14.53	.375	.375	10.00	.531	5.66		
16X 5X .438/.719T	36.01	184.4	85.8	1012.1	6.7	5.5	11.8	10.59	16.72	.438	.438	5.00	.719	7.57		
16X 9X .375/.594T	36.01	166.9	92.8	903.7	6.3	5.4	9.7	10.59	14.59	.375	.375	9.00	.594	5.68		
16X 6X .438/.556T	37.20	186.3	91.1	1053.6	6.8	5.7	11.6	10.94	16.66	.438	.438	6.00	.556	7.54		
18X 6X .438/.531T	37.60	204.9	94.0	1230.6	7.3	6.0	13.1	11.06	18.53	.438	.438	6.00	.531	8.36		
18X 5X .438/.556T	37.94	206.2	95.1	1251.0	7.3	6.1	13.2	11.16	18.66	.438	.438	5.00	.556	8.42		
14X10X .375/.594T	38.05	168.9	100.6	955.3	6.4	5.7	9.5	11.13	14.59	.375	.375	10.00	.594	5.68		
16X 6X .438/.719T	38.45	188.9	96.4	1103.2	6.9	5.8	11.4	11.31	16.72	.438	.438	6.00	.719	7.57		
18X 6X .438/.594T	38.90	208.2	100.1	1294.9	7.4	6.2	12.9	11.44	18.59	.438	.438	6.00	.594	8.39		
18X 5X .438/.719T	39.00	209.0	100.1	1304.6	7.5	6.2	13.0	11.47	18.72	.438	.438	5.00	.719	8.45		
16X 8X .438/.594T	39.95	190.5	103.3	1148.6	7.0	6.0	11.1	11.75	16.59	.438	.438	8.00	.594	7.51		
16X 9X .438/.531T	40.05	190.3	103.9	1148.8	6.9	6.0	11.1	11.78	16.53	.438	.438	9.00	.531	7.49		
14X11X .375/.594T	40.05	170.7	108.5	1005.2	6.5	5.9	9.3	11.78	14.59	.375	.375	11.00	.594	5.68		
18X 7X .438/.594T	40.90	212.4	109.8	1366.5	7.6	6.5	12.6	12.03	18.59	.438	.438	7.00	.594	8.39		
18X 8X .438/.531T	41.24	212.7	111.7	1398.2	7.6	6.6	12.5	12.13	18.53	.438	.438	8.00	.531	8.36		
18X 6X .438/.719T	41.45	214.0	111.9	1416.9	7.6	6.6	12.7	12.19	18.72	.438	.438	6.00	.719	8.45		
16X10X .438/.531T	41.95	192.8	111.9	1210.4	7.1	6.3	10.8	12.31	16.53	.438	.438	10.00	.531	7.49		
16X 9X .438/.594T	41.96	193.3	112.0	1216.6	7.1	6.3	10.9	12.34	16.59	.438	.438	9.00	.594	7.51		
18X 7X .438/.556T	42.40	214.2	116.1	1447.2	7.7	6.8	12.5	12.47	18.66	.438	.438	7.00	.556	8.42		
18X11X .375/.556T	42.40	172.8	117.0	1062.1	6.6	6.1	9.1	12.47	14.66	.375	.375	11.00	.556	5.71		
18X 9X .438/.531T	43.04	215.9	120.4	1475.9	7.7	6.8	12.3	12.66	18.53	.438	.438	9.00	.531	8.36		
16X10X .438/.594T	44.00	195.8	120.9	1282.2	7.2	6.5	10.6	12.94	16.59	.438	.438	10.00	.594	7.51		
18X 8X .438/.556T	44.64	219.1	127.6	1549.7	7.8	7.1	12.1	13.13	18.66	.438	.438	8.00	.556	8.42		
16X11X .438/.594T	46.00	197.9	129.5	1342.6	7.2	6.8	10.4	13.53	16.59	.438	.438	11.00	.594	7.51		
16X10X .438/.556T	46.10	198.4	129.7	1350.7	7.3	6.8	10.4	13.56	16.66	.438	.438	10.00	.556	7.54		
18X 9X .438/.556T	46.85	222.3	138.4	1639.4	8.0	7.4	11.8	13.78	18.66	.438	.438	9.00	.556	8.42		
16X10X .438/.594T	46.95	222.1	139.3	1639.5	8.0	7.4	11.8	13.81	18.59	.438	.438	10.00	.594	8.39		
18X10X .438/.719T	48.25	200.9	138.7	1418.2	7.4	7.1	10.2	14.13	16.72	.438	.438	10.00	.719	7.57		
16X11X .438/.556T	48.35	200.6	139.4	1416.2	7.3	7.1	10.2	14.22	16.66	.438	.438	11.00	.556	7.54		
18X10X .438/.556T	49.10	225.1	149.1	1724.1	8.1	7.7	11.6	14.44	18.66	.438	.438	10.00	.556	8.42		
16X11X .438/.719T	50.69	202.9	149.0	1484.9	7.4	7.3	10.0	14.91	16.72	.438	.438	11.00	.719	7.57		
18X11X .438/.556T	51.31	227.6	159.8	1804.4	8.2	7.9	11.3	15.09	18.66	.438	.438	11.00	.556	8.42		
21X 8X .500/.525T	52.70	259.8	155.8	2161.4	8.9	8.3	13.9	15.50	21.63	.500	.500	8.00	.525	11.10		
18X12X .438/.556T	53.55	229.8	170.5	1881.0	8.2	8.2	11.0	15.75	18.66	.438	.438	12.00	.556	8.42		
21X 8X .500/.608T	54.40	263.4	164.9	2256.4	9.0	8.6	13.7	16.00	21.69	.500	.500	8.00	.608	11.13		
21X 8X .500/.750T	56.10	266.7	173.8	2347.4	9.1	8.8	13.5	16.50	21.75	.500	.500	8.00	.750	11.16		
21X10X .500/.525T	56.95	267.3	179.1	2379.9	9.1	8.9	13.3	16.75	21.63	.500	.500	10.00	.525	11.10		
21X 9X .500/.750T	58.65	270.7	188.0	2475.3	9.2	9.1	13.2	17.25	21.75	.500	.500	9.00	.750	11.16		

0.5625 - 9/16 in.



-.563 IN. PLATE (AREA= 12.02 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	THICK	
21X11X .500/.625	59.09	270.5	131.0	2484.3	9.2	9.2	13.0	17.38	21.63	.500	11.00	.625	11.18
21X 8X .500/.875	59.50	272.7	131.8	2527.3	9.3	9.3	13.2	17.50	21.88	.500	8.00	.875	11.22
21X10X .500/.750	61.20	274.2	201.8	2593.0	9.3	9.5	12.9	18.00	21.75	.500	10.00	.750	11.16
21X11X .500/.688	61.40	274.1	203.4	2597.8	9.3	9.5	12.8	18.06	21.69	.500	11.00	.688	11.13
21X13X .500/.688	66.10	279.5	229.2	2802.0	9.4	10.0	12.2	19.44	21.69	.500	13.00	.688	11.13
21X12X .500/.750	66.30	280.1	229.8	2816.7	9.5	10.1	12.3	19.50	21.75	.500	12.00	.750	11.16
21X11X .500/.875	68.44	283.1	240.4	2917.2	9.5	10.3	12.1	20.13	21.88	.500	11.00	.875	11.22
21X 9X .625/.750	73.95	323.2	235.2	3445.9	10.1	10.7	14.6	21.75	24.75	.625	9.00	.750	15.82
21X10X .625/.750	76.50	327.7	250.9	3596.9	10.2	11.0	14.3	22.50	24.75	.625	10.00	.750	15.82
21X11X .625/.750	79.05	331.7	266.2	3738.4	10.3	11.3	14.0	23.25	24.75	.625	11.00	.750	15.82
21X10X .625/.875	80.75	335.1	275.3	3845.1	10.4	11.5	14.0	23.75	24.88	.625	10.00	.875	15.90
21X 9X .625/1.125	85.44	343.1	301.2	4200.9	10.5	12.0	13.7	25.13	25.13	.625	9.00	1.125	16.06
21X13X .625/.875	89.69	346.2	329.1	4292.2	10.6	12.4	13.0	26.38	24.88	.625	13.00	.875	15.90
21X14X .625/.875	92.65	349.2	347.0	4428.7	10.6	12.7	12.8	27.25	24.88	.625	14.00	.875	15.90
21X11X .625/1.125	93.09	351.6	347.0	4487.0	10.7	13.1	12.6	28.50	25.13	.625	11.00	1.125	16.06
21X 9X .688/1.125	97.55	400.4	355.2	5400.5	11.5	13.5	15.2	28.69	28.13	.688	9.00	1.125	19.74
21X16X .625/.875	98.60	354.6	382.6	4682.0	10.7	13.2	12.2	29.00	24.88	.625	16.00	.875	15.90
21X12X .688/.875	98.80	400.5	366.7	5444.1	11.5	13.6	14.8	29.06	27.88	.688	12.00	.875	19.57
21X13X .688/.875	101.80	404.6	386.5	5622.2	11.6	13.9	14.5	29.94	27.88	.688	13.00	.875	19.57
21X11X .688/1.125	105.20	410.9	406.0	5960.2	11.7	14.3	14.4	30.94	28.13	.688	11.00	1.125	19.74
30X13X .750/.875	115.19	468.3	448.6	7204.4	12.5	15.4	16.1	33.88	30.88	.750	13.00	.875	23.58
21X14X .688/1.125	116.65	423.2	480.9	6458.8	11.8	15.3	13.4	34.31	28.13	.688	14.00	1.125	19.74
30X11X .750/1.125	118.59	475.6	469.9	7491.5	12.6	15.8	15.9	34.88	31.13	.750	11.00	1.125	23.77
21X15X .688/1.125	120.50	426.6	506.5	6643.8	11.8	15.6	13.1	35.44	28.13	.688	15.00	1.125	19.74
30X12X .750/1.125	122.40	481.2	497.7	7753.6	12.7	16.1	15.6	36.00	31.13	.750	12.00	1.125	23.77
30X16X .750/.875	124.10	481.3	513.4	7810.7	12.7	16.2	15.2	36.50	30.88	.750	16.00	.875	23.58
21X16X .688/1.125	124.30	429.7	531.0	6814.4	11.8	15.9	12.8	36.56	28.13	.688	16.00	1.125	19.74
30X14X .750/1.125	130.05	490.8	552.6	8237.5	12.8	16.8	14.9	38.25	31.13	.750	14.00	1.125	23.77
30X10X .875/1.375	136.00	503.4	516.4	8142.2	12.5	16.2	15.8	40.00	31.38	.875	10.00	1.375	27.95
33X12X .875/1.125	144.09	564.2	580.4	9925.2	13.5	17.6	17.1	42.38	34.13	.875	12.00	1.125	30.36
33X10X .875/1.375	144.94	567.9	582.4	10047.2	13.6	17.7	17.3	42.63	34.38	.875	10.00	1.375	30.57
36X10X .875/1.125	145.35	615.2	584.1	11293.9	14.4	18.4	19.3	42.75	37.13	.875	10.00	1.125	32.98
33X11X .875/1.375	149.60	575.5	618.6	10417.5	13.6	18.1	16.8	44.00	34.38	.875	11.00	1.375	38.57
33X14X .875/1.125	151.74	576.3	639.2	10513.6	13.6	18.2	16.4	44.63	34.13	.875	14.00	1.125	30.36
36X10X .875/1.500	158.10	644.1	684.8	12633.0	14.7	19.6	18.4	46.50	37.50	.875	10.00	1.500	33.30
36X14X .875/1.375	172.55	665.4	806.7	13835.0	14.8	20.8	17.1	50.75	37.38	.875	14.00	1.375	33.20
36X15X .875/1.500	183.60	680.6	895.0	14715.3	14.9	21.6	16.4	54.00	37.50	.875	15.00	1.500	33.30

0.5625 - 9/16 in.

-.625 IN. PLATE (AREA= 14.84 SQ.IN.)

***** BEAM DIMENSIONS *****										FLANGE		SHEAR																	
SECTION MODULUS										WIDTH		THICK		AREA															
NOMINAL SIZE										ZPL		ZFL		INERTIA		R		YP		VF		AREA		DEPTH		WEB THICK			
WT/FT										14.0		1.8		6.2		.6		.4		3.4		.75		3.19		.125		2.00	
3X 2X .125/ .108T	4X 2X .125/ .108T	5X 2X .125/ .108T	6X 2X .125/ .108T	7X 2X .125/ .108T	8X 2X .125/ .108T	9X 2X .125/ .108T	10X 2X .125/ .108T	11X 2X .125/ .108T	12X 2X .125/ .108T	13X 2X .125/ .108T	14X 2X .125/ .108T	15X 2X .125/ .108T	16X 2X .125/ .108T	17X 2X .125/ .108T	18X 2X .125/ .108T	19X 2X .125/ .108T	20X 2X .125/ .108T	21X 2X .125/ .108T	22X 2X .125/ .108T	23X 2X .125/ .108T	24X 2X .125/ .108T	25X 2X .125/ .108T	26X 2X .125/ .108T	27X 2X .125/ .108T	28X 2X .125/ .108T	29X 2X .125/ .108T	30X 2X .125/ .108T		
3X 3X .125/ .108T	4X 3X .125/ .108T	5X 3X .125/ .108T	6X 3X .125/ .108T	7X 3X .125/ .108T	8X 3X .125/ .108T	9X 3X .125/ .108T	10X 3X .125/ .108T	11X 3X .125/ .108T	12X 3X .125/ .108T	13X 3X .125/ .108T	14X 3X .125/ .108T	15X 3X .125/ .108T	16X 3X .125/ .108T	17X 3X .125/ .108T	18X 3X .125/ .108T	19X 3X .125/ .108T	20X 3X .125/ .108T	21X 3X .125/ .108T	22X 3X .125/ .108T	23X 3X .125/ .108T	24X 3X .125/ .108T	25X 3X .125/ .108T	26X 3X .125/ .108T	27X 3X .125/ .108T	28X 3X .125/ .108T	29X 3X .125/ .108T	30X 3X .125/ .108T		
3X 4X .125/ .108T	4X 4X .125/ .108T	5X 4X .125/ .108T	6X 4X .125/ .108T	7X 4X .125/ .108T	8X 4X .125/ .108T	9X 4X .125/ .108T	10X 4X .125/ .108T	11X 4X .125/ .108T	12X 4X .125/ .108T	13X 4X .125/ .108T	14X 4X .125/ .108T	15X 4X .125/ .108T	16X 4X .125/ .108T	17X 4X .125/ .108T	18X 4X .125/ .108T	19X 4X .125/ .108T	20X 4X .125/ .108T	21X 4X .125/ .108T	22X 4X .125/ .108T	23X 4X .125/ .108T	24X 4X .125/ .108T	25X 4X .125/ .108T	26X 4X .125/ .108T	27X 4X .125/ .108T	28X 4X .125/ .108T	29X 4X .125/ .108T	30X 4X .125/ .108T		
3X 5X .125/ .108T	4X 5X .125/ .108T	5X 5X .125/ .108T	6X 5X .125/ .108T	7X 5X .125/ .108T	8X 5X .125/ .108T	9X 5X .125/ .108T	10X 5X .125/ .108T	11X 5X .125/ .108T	12X 5X .125/ .108T	13X 5X .125/ .108T	14X 5X .125/ .108T	15X 5X .125/ .108T	16X 5X .125/ .108T	17X 5X .125/ .108T	18X 5X .125/ .108T	19X 5X .125/ .108T	20X 5X .125/ .108T	21X 5X .125/ .108T	22X 5X .125/ .108T	23X 5X .125/ .108T	24X 5X .125/ .108T	25X 5X .125/ .108T	26X 5X .125/ .108T	27X 5X .125/ .108T	28X 5X .125/ .108T	29X 5X .125/ .108T	30X 5X .125/ .108T		
3X 6X .125/ .108T	4X 6X .125/ .108T	5X 6X .125/ .108T	6X 6X .125/ .108T	7X 6X .125/ .108T	8X 6X .125/ .108T	9X 6X .125/ .108T	10X 6X .125/ .108T	11X 6X .125/ .108T	12X 6X .125/ .108T	13X 6X .125/ .108T	14X 6X .125/ .108T	15X 6X .125/ .108T	16X 6X .125/ .108T	17X 6X .125/ .108T	18X 6X .125/ .108T	19X 6X .125/ .108T	20X 6X .125/ .108T	21X 6X .125/ .108T	22X 6X .125/ .108T	23X 6X .125/ .108T	24X 6X .125/ .108T	25X 6X .125/ .108T	26X 6X .125/ .108T	27X 6X .125/ .108T	28X 6X .125/ .108T	29X 6X .125/ .108T	30X 6X .125/ .108T		
3X 7X .125/ .108T	4X 7X .125/ .108T	5X 7X .125/ .108T	6X 7X .125/ .108T	7X 7X .125/ .108T	8X 7X .125/ .108T	9X 7X .125/ .108T	10X 7X .125/ .108T	11X 7X .125/ .108T	12X 7X .125/ .108T	13X 7X .125/ .108T	14X 7X .125/ .108T	15X 7X .125/ .108T	16X 7X .125/ .108T	17X 7X .125/ .108T	18X 7X .125/ .108T	19X 7X .125/ .108T	20X 7X .125/ .108T	21X 7X .125/ .108T	22X 7X .125/ .108T	23X 7X .125/ .108T	24X 7X .125/ .108T	25X 7X .125/ .108T	26X 7X .125/ .108T	27X 7X .125/ .108T	28X 7X .125/ .108T	29X 7X .125/ .108T	30X 7X .125/ .108T		
3X 8X .125/ .108T	4X 8X .125/ .108T	5X 8X .125/ .108T	6X 8X .125/ .108T	7X 8X .125/ .108T	8X 8X .125/ .108T	9X 8X .125/ .108T	10X 8X .125/ .108T	11X 8X .125/ .108T	12X 8X .125/ .108T	13X 8X .125/ .108T	14X 8X .125/ .108T	15X 8X .125/ .108T	16X 8X .125/ .108T	17X 8X .125/ .108T	18X 8X .125/ .108T	19X 8X .125/ .108T	20X 8X .125/ .108T	21X 8X .125/ .108T	22X 8X .125/ .108T	23X 8X .125/ .108T	24X 8X .125/ .108T	25X 8X .125/ .108T	26X 8X .125/ .108T	27X 8X .125/ .108T	28X 8X .125/ .108T	29X 8X .125/ .108T	30X 8X .125/ .108T		
3X 9X .125/ .108T	4X 9X .125/ .108T	5X 9X .125/ .108T	6X 9X .125/ .108T	7X 9X .125/ .108T	8X 9X .125/ .108T	9X 9X .125/ .108T	10X 9X .125/ .108T	11X 9X .125/ .108T	12X 9X .125/ .108T	13X 9X .125/ .108T	14X 9X .125/ .108T	15X 9X .125/ .108T	16X 9X .125/ .108T	17X 9X .125/ .108T	18X 9X .125/ .108T	19X 9X .125/ .108T	20X 9X .125/ .108T	21X 9X .125/ .108T	22X 9X .125/ .108T	23X 9X .125/ .108T	24X 9X .125/ .108T	25X 9X .125/ .108T	26X 9X .125/ .108T	27X 9X .125/ .108T	28X 9X .125/ .108T	29X 9X .125/ .108T	30X 9X .125/ .108T		
3X 10X .125/ .108T	4X 10X .125/ .108T	5X 10X .125/ .108T	6X 10X .125/ .108T	7X 10X .125/ .108T	8X 10X .125/ .108T	9X 10X .125/ .108T	10X 10X .125/ .108T	11X 10X .125/ .108T	12X 10X .125/ .108T	13X 10X .125/ .108T	14X 10X .125/ .108T	15X 10X .125/ .108T	16X 10X .125/ .108T	17X 10X .125/ .108T	18X 10X .125/ .108T	19X 10X .125/ .108T	20X 10X .125/ .108T	21X 10X .125/ .108T	22X 10X .125/ .108T	23X 10X .125/ .108T	24X 10X .125/ .108T	25X 10X .125/ .108T	26X 10X .125/ .108T	27X 10X .125/ .108T	28X 10X .125/ .108T	29X 10X .125/ .108T	30X 10X .125/ .108T		
3X 11X .125/ .108T	4X 11X .125/ .108T	5X 11X .125/ .108T	6X 11X .125/ .108T	7X 11X .125/ .108T	8X 11X .125/ .108T	9X 11X .125/ .108T	10X 11X .125/ .108T	11X 11X .125/ .108T	12X 11X .125/ .108T	13X 11X .125/ .108T	14X 11X .125/ .108T	15X 11X .125/ .108T	16X 11X .125/ .108T	17X 11X .125/ .108T	18X 11X .125/ .108T	19X 11X .125/ .108T	20X 11X .125/ .108T	21X 11X .125/ .108T	22X 11X .125/ .108T	23X 11X .125/ .108T	24X 11X .125/ .108T	25X 11X .125/ .108T	26X 11X .125/ .108T	27X 11X .125/ .108T	28X 11X .125/ .108T	29X 11X .125/ .108T	30X 11X .125/ .108T		
3X 12X .125/ .108T	4X 12X .125/ .108T	5X 12X .125/ .108T	6X 12X .125/ .108T	7X 12X .125/ .108T	8X 12X .125/ .108T	9X 12X .125/ .108T	10X 12X .125/ .108T	11X 12X .125/ .108T	12X 12X .125/ .108T	13X 12X .125/ .108T	14X 12X .125/ .108T	15X 12X .125/ .108T	16X 12X .125/ .108T	17X 12X .125/ .108T	18X 12X .125/ .108T	19X 12X .125/ .108T	20X 12X .125/ .108T	21X 12X .125/ .108T	22X 12X .125/ .108T	23X 12X .125/ .108T	24X 12X .125/ .108T	25X 12X .125/ .108T	26X 12X .125/ .108T	27X 12X .125/ .108T	28X 12X .125/ .108T	29X 12X .125/ .108T	30X 12X .125/ .108T		
3X 13X .125/ .108T	4X 13X .125/ .108T	5X 13X .125/ .108T	6X 13X .125/ .108T	7X 13X .125/ .108T	8X 13X .125/ .108T	9X 13X .125/ .108T	10X 13X .125/ .108T	11X 13X .125/ .108T	12X 13X .125/ .108T	13X 13X .125/ .108T	14X 13X .125/ .108T	15X 13X .125/ .108T	16X 13X .125/ .108T	17X 13X .125/ .108T	18X 13X .125/ .108T	19X 13X .125/ .108T	20X 13X .125/ .108T	21X 13X .125/ .108T	22X 13X .125/ .108T	23X 13X .125/ .108T	24X 13X .125/ .108T	25X 13X .125/ .108T	26X 13X .125/ .108T	27X 13X .125/ .108T	28X 13X .125/ .108T	29X 13X .125/ .108T	30X 13X .125/ .108T		
3X 14X .125/ .108T	4X 14X .125/ .108T	5X 14X .125/ .108T	6X 14X .125/ .108T	7X 14X .125/ .108T	8X 14X .125/ .108T	9X 14X .125/ .108T	10X 14X .125/ .108T	11X 14X .125/ .108T	12X 14X .125/ .108T	13X 14X .125/ .108T	14X 14X .125/ .108T	15X 14X .125/ .108T	16X 14X .125/ .108T	17X 14X .125/ .108T	18X 14X .125/ .108T	19X 14X .125/ .108T	20X 14X .125/ .108T	21X 14X .125/ .108T	22X 14X .125/ .108T	23X 14X .125/ .108T	24X 14X .125/ .108T	25X 14X .125/ .108T	26X 14X .125/ .108T	27X 14X .125/ .108T	28X 14X .125/ .108T	29X 14X .125/ .108T	30X 14X .125/ .108T		
3X 15X .125/ .108T	4X 15X .125/ .108T	5X 15X .125/ .108T	6X 15X .125/ .108T	7X 15X .125/ .108T	8X 15X .125/ .108T	9X 15X .125/ .108T	10X 15X .125/ .108T	11X 15X .125/ .108T	12X 15X .125/ .108T	13X 15X .125/ .108T	14X 15X .125/ .108T	15X 15X .125/ .108T	16X 15X .125/ .108T	17X 15X .125/ .108T	18X 15X .125/ .108T	19X 15X .125/ .108T	20X 15X .125/ .108T	21X 15X .125/ .108T	22X 15X .125/ .108T	23X 15X .125/ .108T	24X 15X .125/ .108T	25X 15X .125/ .108T	26X 15X .125/ .108T	27X 15X .125/ .108T	28X 15X .125/ .108T	29X 15X .125/ .108T	30X 15X .125/ .108T		
3X 16X .125/ .108T	4X 16X .125/ .108T	5X 16X .125/ .108T	6X 16X .125/ .108T	7X 16X .125/ .108T	8X 16X .125/ .108T	9X 16X .125/ .108T	10X 16X .125/ .108T	11X 16X .125/ .108T	12X 16X .125/ .108T	13X 16X .125/ .108T	14X 16X .125/ .108T	15X 16X .125/ .108T	16X 16X .125/ .108T	17X 16X .125/ .108T	18X 16X .125/ .108T	19X 16X .125/ .108T	20X 16X .125/ .108T	21X 16X .125/ .108T	22X 16X .125/ .108T	23X 16X .125/ .108T	24X 16X .125/ .108T	25X 16X .125/ .108T	26X 16X .125/ .108T	27X 16X .125/ .108T	28X 16X .125/ .108T	29X 16X .125/ .108T	30X 16X .125/ .108T		
3X 17X .125/ .108T	4X 17X .125/ .108T	5X 17X .125/ .108T	6X 17X .125/ .108T	7X 17X .125/ .108T	8X 17X .125/ .108T	9X 17X .125/ .108T	10X 17X .125/ .108T	11X 17X .125/ .108T	12X 17X .125/ .108T	13X 17X .125/ .108T	14X 17X .125/ .108T	15X 17X .125/ .108T	16X 17X .125/ .108T	17X 17X .125/ .108T	18X 17X .125/ .108T	19X 17X .125/ .108T	20X 17X .125/ .108T	21X 17X .125/ .108T	22X 17X .125/ .108T	23X 17X .125/ .108T	24X 17X .125/ .108T	25X 17X .125/ .108T	26X 17X .125/ .108T	27X 17X .125/ .108T	28X 17X .125/ .108T	29X 17X .125/ .108T	30X 17X .125/ .108T		
3X 18X .125/ .108T	4X 18X .125/ .108T	5X 18X .125/ .108T	6X 18X .125/ .108T	7X 18X .125/ .108T	8X 18X .125/ .108T	9X 18X .125/ .108T	10X 18X .125/ .108T	11X 18X .125/ .108T	12X 18X .125/ .108T	13X 18X .125/ .108T	14X 18X .125/ .108T	15X 18X .125/ .108T	16X 18X .125/ .108T	17X 18X .125/ .108T	18X 18X .125/ .108T	19X 18X .125/ .108T	20X 18X .125/ .108T	21X 18X .125/ .108T	22X 18X .125/ .108T	23X 18X .125/ .108T	24X 18X .125/ .108T	25X 18X .125/ .108T	26X 18X .125/ .108T	27X 18X .125/ .108T	28X 18X .125/ .108T	29X 18X .125/ .108T	30X 18X .125/ .108T		
3X 19X .125/ .108T	4X 19X .125/ .108T	5X 19X .125/ .108T	6X 19X .125/ .108T	7X 19X .125/ .108T	8X 19X .125/ .108T	9X 19X .125/ .108T	10X 19X .125/ .108T	11X 19X .125/ .108T	12X 19X .125/ .108T	13X 19X .125/ .108T	14X 19X .125/ .108T	15X 19X .125/ .108T	16X 19X .125/ .108T	17X 19X .125/ .108T	18X 19X .125/ .108T	19X 19X .125/ .108T	20X 19X .125/ .108T	21X 19X .125/ .108T	22X 19X .125/ .108T	23X 19X .125/ .108T	24X 19X .125/ .108T	25X 19X .125/ .108T	26X 19X .125/ .108T	27X 19X .125/ .108T	28X 19X .125/ .108T	29X 19X .125/ .108T	30X 19X .125/ .108T		
3X 20X .125/ .108T	4X 20X .125/ .108T	5X 20X .125/ .108T	6X 20X .125/ .108T	7X 20X .125/ .108T	8X 20X .125/ .108T	9X 20X .125/ .108T	10X 20X .125/ .108T	11X 20X .125/ .108T	12X 20X .125/ .108T	13X 20X .125/ .108T	14X 20X .125/ .108T	15X 20X .125/ .108T	16X 20X .125/ .108T	17X 20X .125/ .108T	18X 20X .125/ .108T	19X 20X .125/ .108T	20X 20X .125/ .108T	21X 20X .125/ .108T	22X 20X .125/ .108T	23X 20X .125/ .108T	24X 20X .125/ .108T	25X 20X .125/ .108T	26X 20X .125/ .108T	27X 20X .125/ .108T	28X 20X .125/ .108T	29X 20X .125/ .108T	30X 20X .125/ .108T		
3X 21X .125/ .108T	4X 21X .125/ .108T	5X 21X .125/ .108T	6X 21X .125/ .108T	7X 21X .125/ .108T	8X 21X .125/ .108T	9X 21X .125/ .108T	10X 21X .125/ .108T	11X 21X .125/ .108T	12X 21X .125/ .108T	13X 21X .125/ .108T	14X 21X .125/ .108T	15X 21X .125/ .108T	16X 21X .125/ .108T	17X 21X .125/ .108T	18X 21X .125/ .108T	19X 21X .125/ .108T	20X 21X .125/ .108T	21X 21X .125/ .108T	22X 21X .125/ .108T	23X 21X .125/ .108T	24X 21X .125/ .108T	25X 21X .125/ .108T	26X 21X .125/ .108T	27X 21X .125/ .108T	28X 21X .125/ .108T	29X 21X .125/ .108T	30X 21X .125/ .108T		
3X 22X .125/ .108T	4X 2																												

0.6250 - 5/8 in.



.625 IN. PLATE (AREA= 14.84 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	DIMENSIONS					SHEAR AREA
		ZPL	ZFL	INERTIA				AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	
8X 6X .250/ .438T	15.74	99.6	26.5	189.9	3.1	1.9	7.2	4.63	8.44	.250	6.00	.438	2.27
10X 5X .250/ .438T	15.95	123.0	30.1	267.3	3.7	2.2	8.9	4.69	10.44	.250	5.00	.438	2.77
10X 6X .250/ .375T	16.15	123.2	30.7	270.6	3.7	2.2	8.0	4.75	10.38	.250	6.00	.375	2.50
9X 7X .250/ .375T	16.59	112.7	30.4	239.7	3.5	2.1	7.9	4.68	9.38	.250	7.00	.375	2.50
8X 7X .250/ .438T	17.20	102.3	30.8	210.4	3.3	2.1	7.0	5.06	8.44	.250	7.00	.438	2.27
10X 7X .250/ .375T	17.44	126.3	34.5	298.1	3.9	2.4	8.6	5.13	10.38	.250	7.00	.375	2.75
9X 7X .250/ .438T	18.05	116.0	34.3	266.5	3.6	2.3	7.8	5.31	9.44	.250	7.00	.438	2.52
12X 4X .313/ .563T	18.29	123.8	32.3	286.5	3.8	2.3	8.9	5.38	10.56	.313	4.00	.563	3.50
12X 4X .313/ .406T	18.29	142.1	33.6	354.2	4.2	2.5	10.5	5.38	12.41	.313	4.00	.406	4.08
8X 8X .250/ .438T	18.70	104.5	33.5	230.1	3.4	2.2	6.9	5.50	8.44	.250	8.00	.438	2.27
10X 7X .250/ .438T	18.90	129.7	38.7	329.7	4.0	2.5	8.5	5.56	10.44	.250	7.00	.438	2.77
12X 4X .313/ .469T	19.14	145.6	36.4	381.6	4.3	2.6	10.5	5.63	12.47	.313	4.00	.469	4.10
9X 8X .250/ .438T	19.55	118.3	38.2	290.8	3.8	2.5	7.6	5.75	9.44	.250	8.00	.438	2.52
12X 5X .313/ .406T	19.65	147.2	38.3	396.2	4.4	2.7	10.3	5.78	12.41	.313	5.00	.406	4.08
12X 4X .313/ .531T	19.99	148.9	39.3	409.0	4.4	2.7	10.4	5.88	12.53	.313	4.00	.531	4.12
10X 8X .250/ .438T	20.40	132.2	43.0	359.2	4.2	2.7	8.3	6.00	10.44	.250	8.00	.438	2.77
12X 5X .313/ .469T	20.71	150.8	41.9	429.4	4.5	2.8	10.2	6.09	12.47	.313	5.00	.469	4.10
12X 6X .313/ .406T	21.05	151.3	43.1	437.0	4.6	2.9	10.1	6.19	12.41	.313	6.00	.406	4.08
12X 5X .313/ .531T	21.79	154.0	45.5	462.2	4.7	3.0	10.2	6.41	12.53	.313	5.00	.531	4.12
12X 6X .313/ .469T	22.30	155.0	47.4	475.1	4.7	3.1	10.0	6.56	12.47	.313	6.00	.469	4.10
12X 7X .313/ .406T	22.41	155.0	47.9	476.8	4.7	3.1	10.0	6.59	12.41	.313	7.00	.406	4.08
12X 6X .313/ .531T	23.60	158.2	51.7	512.8	4.9	3.2	9.9	6.94	12.53	.313	6.00	.531	4.12
12X 7X .313/ .469T	23.90	158.5	52.9	519.3	4.9	3.3	9.8	7.03	12.47	.313	7.00	.469	4.10
14X 4X .375/ .656T	24.24	171.8	48.1	567.4	5.1	3.3	11.8	7.13	14.47	.375	4.00	.656	5.66
14X 4X .375/ .531T	25.09	175.3	51.4	602.0	5.2	3.4	11.7	7.38	14.53	.375	4.00	.531	5.68
12X 7X .313/ .531T	25.40	161.7	57.9	561.0	5.0	3.5	9.7	7.47	12.53	.313	7.00	.531	4.12
12X 8X .313/ .469T	25.50	161.5	58.4	561.7	5.0	3.5	9.6	7.50	12.47	.313	8.00	.469	4.10
14X 4X .375/ .594T	25.94	178.4	54.6	636.1	5.3	3.6	11.6	7.63	14.59	.375	4.00	.594	5.71
12X 5X .375/ .656T	26.45	159.5	54.9	542.4	4.9	3.4	9.9	7.78	12.66	.375	5.00	.656	4.98
14X 4X .375/ .656T	26.79	181.3	57.8	669.9	5.4	3.7	11.6	7.88	14.66	.375	4.00	.656	5.73
14X 5X .375/ .531T	26.89	181.0	58.5	670.2	5.4	3.7	11.5	7.91	14.53	.375	5.00	.531	5.68
12X 8X .313/ .531T	27.20	164.6	64.1	607.1	5.2	3.7	9.5	8.00	12.53	.313	8.00	.531	4.12
14X 6X .375/ .531T	28.70	185.8	65.7	735.8	5.6	4.0	11.2	8.44	14.53	.375	6.00	.531	5.68
14X 5X .375/ .656T	29.00	187.3	66.6	750.9	5.7	4.0	11.3	8.53	14.66	.375	5.00	.656	5.73
14X 7X .375/ .469T	29.06	186.1	67.0	743.8	5.6	4.0	11.1	8.53	14.47	.375	7.00	.469	5.66
12X 9X .313/ .531T	29.08	167.0	70.3	650.7	5.3	3.9	9.3	8.53	12.53	.313	9.00	.531	4.12
14X 6X .375/ .594T	29.95	189.0	70.5	781.7	5.7	4.1	11.1	8.81	14.59	.375	6.00	.594	5.71
14X 7X .375/ .531T	30.50	189.7	72.8	797.1	5.8	4.2	11.0	8.97	14.53	.375	7.00	.531	5.68
14X 8X .375/ .469T	30.60	189.6	73.3	797.8	5.8	4.2	10.9	9.00	14.47	.375	8.00	.469	5.66
12X 10X .313/ .531T	30.80	169.1	76.4	692.5	5.4	4.1	9.1	9.06	12.53	.313	10.00	.531	4.12
14X 6X .375/ .656T	31.25	192.0	75.4	827.3	5.9	4.3	11.0	9.19	14.66	.375	6.00	.656	5.73
14X 7X .375/ .594T	31.99	192.9	78.5	848.8	5.9	4.4	10.8	9.41	14.59	.375	7.00	.594	5.71
14X 8X .375/ .531T	32.30	193.2	79.9	856.6	5.9	4.4	10.7	9.50	14.53	.375	8.00	.531	5.68
16X 5X .438/ .531T	32.84	208.9	73.9	936.8	6.2	4.5	12.7	9.66	16.53	.438	5.00	.531	7.51
16X 5X .438/ .594T	33.90	212.4	78.5	986.8	6.3	4.6	12.6	9.97	16.59	.438	5.00	.594	7.51

0.6250 - 5/8 in.

.625 IN. PLATE (AREA= 14.84 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS				BEAM		FLANGE		SHEAR		
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
14X 8X .375/.594T		34.00	196.4	96.5	913.8	6.1	4.7	10.6	10.00	14.59	.375	8.00	.594		5.71
14X 9X .375/.531T		34.10	196.1	87.0	913.1	6.1	4.7	10.5	10.03	14.53	.375	9.00	.531		5.60
16X 6X .438/.531T		34.65	214.3	82.0	1017.8	6.4	4.8	12.4	10.19	16.53	.438	6.00	.531		7.51
16X 5X .438/.656T		34.95	215.8	83.0	1036.1	6.4	4.8	12.5	10.28	16.66	.438	5.00	.656		7.57
12X10X .375/.594T		35.50	171.9	85.7	756.0	5.5	4.4	8.8	10.44	12.59	.375	10.00	.594		4.96
14X 8X .375/.656T		35.70	199.2	92.8	967.8	6.2	4.9	10.4	10.50	14.66	.375	8.00	.656		5.73
16X 6X .438/.594T		35.90	217.9	87.5	1074.4	6.5	4.9	12.3	10.56	16.59	.438	6.00	.594		7.54
14X10X .375/.531T		35.90	198.6	94.0	967.3	6.2	4.9	10.3	10.56	14.53	.375	10.00	.531		5.68
16X 5X .438/.719T		36.01	218.8	87.5	1084.6	6.5	5.0	12.4	10.59	16.72	.438	5.00	.719		7.60
14X 9X .375/.594T		36.01	199.2	94.4	974.2	6.2	4.9	10.3	10.59	14.59	.375	9.00	.594		5.71
16X 6X .438/.656T		37.20	221.2	92.9	1130.8	6.6	5.1	12.2	10.94	16.66	.438	6.00	.656		7.57
18X 6X .438/.531T		37.60	242.8	96.0	1318.0	7.1	5.4	13.7	11.06	18.53	.438	6.00	.531		8.39
18X 5X .438/.656T		37.94	244.3	97.1	1340.2	7.2	5.5	13.8	11.16	18.66	.438	5.00	.656		8.45
14X10X .375/.594T		38.05	201.7	102.3	1032.6	6.3	5.1	10.1	11.19	14.59	.375	10.00	.594		5.71
16X 6X .438/.719T		38.45	224.3	98.3	1185.8	6.7	5.3	12.1	11.31	16.72	.438	6.00	.719		7.60
18X 6X .438/.594T		38.90	246.8	102.2	1388.8	7.3	5.6	13.6	11.44	18.59	.438	6.00	.594		8.42
18X 5X .438/.719T		39.00	247.7	102.2	1399.2	7.3	5.6	13.7	11.47	18.72	.438	5.00	.719		8.47
16X 8X .438/.594T		39.95	226.3	105.3	1236.8	6.8	5.5	11.7	11.75	16.59	.438	8.00	.594		7.54
16X 9X .438/.531T		40.05	226.1	105.9	1237.3	6.8	5.5	11.7	11.78	16.53	.438	9.00	.531		7.51
14X11X .375/.594T		40.05	204.0	110.3	1089.3	6.4	5.3	9.9	11.78	14.59	.375	11.00	.594		5.71
18X 7X .438/.594T		40.90	251.8	112.1	1490.4	7.4	5.9	13.3	12.03	18.59	.438	7.00	.594		8.42
18X 8X .438/.531T		41.24	252.2	114.0	1503.6	7.5	6.0	13.2	12.13	18.53	.438	8.00	.531		8.39
18X 6X .438/.719T		41.45	253.8	114.2	1523.8	7.5	6.0	13.3	12.19	18.72	.438	6.00	.719		8.47
16X10X .438/.531T		41.85	229.2	114.0	1306.4	6.9	5.7	11.5	12.31	16.53	.438	10.00	.531		7.51
16X 9X .438/.594T		41.96	229.8	114.2	1313.2	7.0	5.7	11.5	12.34	16.59	.438	9.00	.594		7.54
18X 7X .438/.656T		42.40	254.1	118.5	1558.9	7.6	6.1	13.2	12.47	18.66	.438	7.00	.656		8.45
14X11X .375/.656T		42.40	206.6	119.0	1154.1	6.5	5.6	9.7	12.47	14.66	.375	11.00	.656		5.73
18X 9X .438/.531T		43.04	256.1	122.9	1590.3	7.6	6.2	12.9	12.66	18.53	.438	9.00	.531		8.39
16X10X .438/.594T		44.00	232.8	123.2	1387.1	7.1	6.0	11.3	12.94	16.59	.438	10.00	.594		7.54
18X 8X .438/.656T		44.64	259.9	130.2	1672.5	7.7	6.4	12.9	13.13	18.66	.438	8.00	.656		8.45
16X11X .438/.594T		46.00	235.4	132.0	1455.6	7.2	6.2	11.0	13.53	16.59	.438	11.00	.594		7.54
16X10X .438/.656T		46.10	236.0	132.2	1464.5	7.2	6.2	11.1	13.56	16.66	.438	10.00	.656		7.57
18X 9X .438/.656T		46.85	263.8	141.2	1773.4	7.9	6.7	12.6	13.78	18.66	.438	9.00	.656		8.45
18X10X .438/.594T		46.95	263.6	142.1	1773.8	7.9	6.7	12.5	13.81	18.59	.438	10.00	.594		8.42
16X10X .438/.719T		48.25	239.0	141.4	1541.1	7.3	6.4	10.9	14.19	16.72	.438	10.00	.719		7.60
16X11X .438/.656T		48.35	238.7	142.0	1539.1	7.3	6.4	10.8	14.22	16.66	.438	11.00	.656		7.57
18X10X .438/.656T		49.10	267.2	152.1	1869.2	8.0	7.0	12.3	14.44	18.66	.438	10.00	.656		8.45
16X11X .438/.719T		50.69	241.5	151.9	1617.4	7.4	6.7	10.6	14.91	16.72	.438	11.00	.719		7.60
18X11X .438/.656T		51.31	270.2	163.0	1960.5	8.1	7.3	12.0	15.03	18.66	.438	11.00	.656		8.45
21X 8X .500/.625T		52.70	306.3	159.4	2333.5	8.8	7.6	14.6	15.50	21.63	.500	8.00	.625		11.13
18X12X .438/.656T		53.55	272.8	173.9	2047.9	8.2	7.5	11.8	15.75	18.66	.438	12.00	.656		8.45
21X 8X .500/.688T		54.40	310.5	168.7	2439.4	8.9	7.9	14.5	16.00	21.69	.500	8.00	.688		11.16
21X 8X .500/.750T		56.10	314.3	177.8	2541.1	9.0	8.1	14.3	16.50	21.75	.500	8.00	.750		11.19
21X10X .500/.625T		56.95	315.1	183.2	2578.3	9.0	8.2	14.1	16.75	21.63	.500	10.00	.625		11.13
21X 9X .500/.750T		58.65	319.1	192.3	2685.1	9.1	8.4	14.0	17.25	21.75	.500	9.00	.750		11.19

0.6250 - 5/8 in.



.625 IN. PLATE (AREA= 14.84 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	318.9	195.3	2695.9	9.1	8.5	13.8	17.38	21.63	.500	11.00	.625	11.13
21X 8X .500/.875T	59.50	321.5	196.3	2743.0	9.2	8.5	14.0	17.50	21.88	.500	8.00	.875	11.25
21X10X .500/.750T	61.20	323.2	206.5	2819.0	9.3	8.7	13.7	18.00	21.75	.500	10.00	.750	11.19
21X11X .500/.688T	61.40	323.1	208.0	2823.9	9.3	8.7	13.6	18.06	21.69	.500	11.00	.688	11.16
21X13X .500/.688T	66.10	329.6	234.3	3056.2	9.4	9.3	13.0	19.44	21.69	.500	13.00	.688	11.16
21X12X .500/.750T	66.30	330.3	235.0	3072.5	9.5	9.3	13.1	19.50	21.75	.500	12.00	.750	11.19
21X11X .500/.875T	68.44	333.8	245.9	3186.5	9.5	9.5	13.0	20.13	21.88	.500	11.00	.875	11.25
24X 9X .625/.750T	73.95	376.8	241.6	3735.5	10.1	9.9	15.5	21.75	24.75	.625	9.00	.750	15.86
24X10X .625/.750T	76.50	382.1	257.6	3904.5	10.2	10.2	15.2	22.50	24.75	.625	10.00	.750	15.86
24X11X .625/.750T	79.05	386.7	273.3	4063.4	10.3	10.5	14.9	23.25	24.75	.625	11.00	.750	15.86
24X10X .625/.875T	80.75	390.6	282.7	4182.5	10.4	10.7	14.8	23.75	24.88	.625	10.00	.875	15.94
24X 9X .625/1.125T	85.44	399.8	309.3	4491.8	10.6	11.2	14.5	25.13	25.13	.625	9.00	1.125	16.10
24X13X .625/.875T	89.69	403.4	337.7	4688.6	10.7	11.6	13.9	26.38	24.88	.625	13.00	.875	15.94
24X14X .625/.875T	92.65	407.0	356.1	4844.2	10.7	11.9	13.6	27.25	24.88	.625	14.00	.875	15.94
24X11X .625/1.125T	93.09	409.7	356.3	4907.9	10.8	12.0	13.8	27.38	25.13	.625	11.00	1.125	16.10
24X12X .625/1.125T	96.90	413.8	379.5	5098.5	10.8	12.3	13.4	28.50	25.13	.625	12.00	1.125	16.10
27X 9X .688/1.125T	97.55	463.0	365.4	5872.2	11.6	12.7	16.1	28.69	28.13	.688	9.00	1.125	19.78
24X16X .625/.875T	98.60	413.2	392.5	5134.1	10.8	12.4	13.1	29.00	24.88	.625	16.00	.875	15.94
27X12X .688/.875T	98.80	463.1	377.0	5923.6	11.6	12.8	15.7	29.06	27.88	.688	12.00	.875	19.61
27X13X .688/.875T	101.80	467.8	397.3	6124.0	11.7	13.1	15.4	29.94	27.88	.688	13.00	.875	19.61
27X11X .688/1.125T	105.20	475.0	417.5	6389.7	11.8	13.5	15.3	30.94	28.13	.688	11.00	1.125	19.78
30X13X .750/.875T	115.19	537.3	461.8	7823.8	12.7	14.6	16.9	33.88	30.88	.750	13.00	.875	23.63
27X14X .688/1.125T	116.65	489.0	434.4	7088.7	12.0	14.5	14.3	34.31	28.13	.688	14.00	1.125	19.78
30X11X .750/1.125T	118.59	545.5	483.8	8141.8	12.8	14.9	16.8	34.88	31.13	.750	11.00	1.125	23.82
27X15X .688/1.125T	120.50	492.9	520.5	7280.0	12.0	14.8	14.0	35.44	28.13	.688	15.00	1.125	19.78
30X12X .750/1.125T	122.40	551.7	512.3	8435.4	12.9	15.3	16.5	36.00	31.13	.750	12.00	1.125	23.82
30X16X .750/.875T	124.10	551.9	528.2	8502.8	12.9	15.4	16.1	36.50	30.88	.750	16.00	.875	23.63
27X16X .688/1.125T	124.30	496.4	545.8	7475.1	12.1	15.1	13.7	36.56	28.13	.688	16.00	1.125	19.78
30X14X .750/1.125T	130.05	562.6	568.6	8979.5	13.0	16.0	15.8	38.25	31.13	.750	14.00	1.125	23.82
30X10X .875/1.375T	136.00	573.1	532.3	8832.1	12.7	15.4	16.6	40.00	31.38	.875	10.00	1.375	28.80
33X12X .875/1.125T	144.09	639.8	598.1	10744.1	13.7	16.8	18.0	42.38	34.13	.875	12.00	1.125	30.41
33X10X .875/1.375T	144.94	643.8	600.4	10875.7	13.8	16.9	18.1	42.63	34.38	.875	10.00	1.375	30.63
36X10X .875/1.125T	145.35	695.3	602.5	12186.5	14.5	17.5	20.2	42.75	37.13	.875	10.00	1.125	33.04
33X11X .875/1.375T	149.60	652.3	637.6	11286.2	13.8	17.3	17.7	44.00	34.38	.875	11.00	1.375	30.63
33X14X .875/1.125T	151.74	653.2	658.4	11396.5	13.8	17.4	17.3	44.63	34.13	.875	14.00	1.125	30.41
36X10X .875/1.500T	158.10	727.2	705.9	13655.9	14.9	18.8	19.3	46.50	37.50	.875	10.00	1.500	33.36
36X14X .875/1.375T	172.55	750.7	830.9	14989.0	15.1	20.0	18.0	50.75	37.38	.875	14.00	1.375	33.25
36X15X .875/1.500T	183.60	767.5	921.7	15966.1	15.2	20.8	17.3	54.00	37.50	.875	15.00	1.500	33.36

0.6250 - 5/8 in.

.088 IN. PLATE (AREA= 17.96 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	FLANGE THICK	
3X 2X .125/.100T	2.55	14.5	1.9	6.5	.6	.4	3.4	.75	3.19	.125	2.00	.188	.48
4X 2X .125/.100T	2.89	22.5	2.5	11.1	.8	.5	4.4	.88	4.19	.125	2.00	.188	.61
5X 2X .125/.100T	3.20	17.9	2.5	8.6	.7	.5	3.4	.94	3.19	.125	3.00	.188	.48
5X 2X .125/.100T	3.40	31.9	3.3	17.4	1.0	.5	5.3	1.00	5.19	.125	2.00	.188	.73
4X 3X .125/.100T	3.60	26.9	3.3	14.4	.9	.5	4.3	1.06	4.19	.125	3.00	.188	.61
5X 3X .125/.100T	4.05	37.7	4.3	22.5	1.1	.6	5.3	1.19	5.19	.125	3.00	.188	.73
4X 2X .100/.313T	4.69	30.1	4.0	17.5	1.0	.6	4.4	1.38	4.31	.188	2.00	.313	.94
5X 3X .100/.313T	5.10	24.1	4.0	13.6	.8	.6	3.4	1.50	3.31	.188	2.00	.313	.75
5X 2X .100/.313T	5.30	41.5	5.1	27.2	1.2	.7	5.3	1.56	5.31	.188	2.00	.313	1.13
6X 2X .100/.313T	5.95	54.0	6.4	40.0	1.4	.7	6.3	1.75	6.31	.188	2.00	.313	1.32
7X 2X .100/.250T	6.15	62.7	6.9	49.4	1.6	.8	7.2	1.81	7.25	.188	2.00	.250	1.49
5X 4X .100/.250T	6.39	48.2	6.8	35.7	1.3	.7	5.3	1.88	5.31	.188	3.00	.313	1.13
5X 4X .100/.250T	6.60	48.9	7.1	36.8	1.4	.8	5.2	1.94	5.25	.188	4.00	.250	1.12
7X 3X .100/.250T	7.00	70.4	8.7	61.6	1.8	.9	7.1	2.06	7.25	.188	3.00	.250	1.49
6X 4X .100/.250T	7.24	62.6	8.8	53.4	1.6	.9	6.1	2.13	6.25	.188	4.00	.250	1.38
5X 4X .100/.313T	7.45	53.3	8.4	43.6	1.5	.8	5.2	2.19	5.31	.188	4.00	.313	1.13
7X 3X .100/.313T	7.65	75.4	10.1	70.9	1.9	.9	7.1	2.25	7.31	.188	3.00	.313	1.50
7X 4X .100/.250T	7.85	76.5	10.5	73.5	1.9	1.0	7.0	2.31	7.25	.188	4.00	.250	1.49
6X 4X .100/.313T	8.09	67.4	10.3	62.6	1.8	.9	6.1	2.38	6.31	.188	4.00	.313	1.32
7X 4X .100/.313T	8.70	81.8	12.3	85.5	2.0	1.0	7.0	2.56	7.31	.188	4.00	.313	1.50
6X 5X .100/.313T	9.15	72.1	12.3	73.5	1.9	1.0	6.0	2.69	6.31	.188	5.00	.313	1.32
6X 3X .250/.438T	9.55	69.6	11.3	69.5	1.8	1.0	6.0	2.81	6.44	.250	3.00	.438	1.78
7X 5X .100/.313T	9.79	87.0	14.6	100.1	2.2	1.1	6.8	2.88	7.31	.188	5.00	.313	1.50
6X 4X .250/.375T	10.20	71.8	12.5	75.4	1.9	1.0	6.0	3.00	6.38	.250	4.00	.375	1.77
7X 3X .250/.438T	10.40	84.1	13.6	95.4	2.1	1.1	7.0	3.06	7.44	.250	3.00	.438	2.03
8X 3X .250/.375T	10.64	95.1	14.7	115.3	2.3	1.2	7.9	3.13	8.38	.250	3.00	.375	2.27
9X 3X .250/.313T	10.85	105.2	15.5	134.8	2.5	1.3	8.7	3.19	9.31	.250	3.00	.313	2.50
8X 4X .250/.313T	11.05	97.2	15.7	121.9	2.4	1.3	7.7	3.25	8.31	.250	4.00	.313	2.25
8X 3X .250/.438T	11.25	98.9	16.1	126.6	2.4	1.3	7.8	3.31	8.44	.250	3.00	.438	2.28
9X 3X .250/.375T	11.49	109.8	17.1	149.1	2.6	1.4	8.7	3.38	9.38	.250	3.00	.375	2.52
10X 3X .250/.313T	11.70	119.9	17.9	171.4	2.8	1.4	9.6	3.44	10.31	.250	3.00	.313	2.75
8X 4X .250/.375T	11.90	101.6	17.7	136.6	2.5	1.3	7.7	3.50	8.38	.250	4.00	.375	2.27
9X 3X .250/.438T	12.10	113.9	18.8	153.2	2.8	1.4	8.7	3.56	9.44	.250	3.00	.438	2.53
10X 3X .250/.375T	12.34	124.5	19.7	180.4	3.0	1.5	9.6	3.63	10.38	.250	3.00	.375	2.77
10X 4X .250/.313T	12.75	126.9	21.0	198.5	3.0	1.6	9.4	3.75	10.31	.250	4.00	.313	2.75
9X 5X .250/.313T	12.95	117.5	21.2	179.3	2.9	1.5	8.5	3.81	9.31	.250	5.00	.313	2.50
8X 5X .250/.375T	13.19	107.1	20.8	158.0	2.7	1.5	7.6	3.88	8.38	.250	5.00	.375	2.27
10X 4X .250/.375T	13.60	132.1	23.5	220.8	3.2	1.7	9.4	4.00	10.38	.250	4.00	.375	2.77
10X 5X .250/.313T	13.80	132.7	24.2	224.7	3.2	1.7	9.3	4.06	10.31	.250	5.00	.313	2.75
9X 5X .250/.375T	14.04	122.4	24.0	201.7	3.0	1.6	8.4	4.13	9.38	.250	5.00	.375	2.52
8X 5X .250/.438T	14.25	111.0	23.3	175.5	2.8	1.6	7.5	4.19	8.44	.250	5.00	.438	2.28
10X 4X .250/.438T	14.45	136.5	25.9	242.6	3.3	1.8	9.3	4.25	10.44	.250	4.00	.438	2.78
10X 5X .250/.375T	14.89	137.9	27.3	251.9	3.4	1.8	9.2	4.38	10.38	.250	5.00	.375	2.77
9X 5X .250/.438T	15.10	126.8	26.8	225.8	3.2	1.8	8.4	4.44	9.44	.250	5.00	.438	2.53
9X 6X .250/.375T	15.30	126.9	27.3	226.3	3.2	1.8	8.3	4.50	9.38	.250	6.00	.375	2.52

0.6875 - 11/16 in.



.688 IN. PLATE (AREA= 17.96 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
8X 6X	.250/.438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE THICK	WIDTH	THICK	THICK	AREA
8X 6X	.250/.438T	15.74	115.2	26.8	198.5	3.0	1.7	7.4	4.63	8.44	.250	.438	6.00	.438	.438	2.28
10X 5X	.250/.438T	15.95	142.5	30.4	278.6	3.5	2.0	9.2	4.69	10.44	.250	.438	5.00	.438	.438	2.78
10X 6X	.250/.375T	16.15	142.8	31.0	282.2	3.5	2.0	9.1	4.75	10.38	.250	.375	6.00	.375	.375	2.77
9X 7X	.250/.375T	16.59	130.7	30.7	250.6	3.3	1.9	8.2	4.88	9.38	.250	.375	7.00	.375	.375	2.52
8X 7X	.250/.438T	17.20	118.6	30.3	220.5	3.1	1.9	7.3	5.06	8.44	.250	.438	7.00	.438	.438	2.28
10X 7X	.250/.375T	17.44	146.9	34.8	311.6	3.7	2.1	8.9	5.13	10.38	.250	.375	7.00	.375	.375	2.77
9X 7X	.250/.438T	18.05	134.9	34.7	279.3	3.5	2.1	8.1	5.31	9.44	.250	.438	7.00	.438	.438	2.53
10X 4X	.313/.563T	18.29	143.7	32.7	299.5	3.6	2.1	9.2	5.38	10.56	.313	.400	.563	.563	.563	3.52
12X 4X	.313/.406T	18.29	165.0	34.0	369.4	4.0	2.2	10.9	5.38	12.41	.313	.400	.406	.406	.406	4.10
8X 8X	.250/.438T	18.70	121.5	33.9	241.8	3.2	2.0	7.1	5.50	8.44	.250	.438	8.00	.438	.438	2.28
10X 7X	.250/.438T	18.90	151.2	39.1	345.5	3.8	2.3	8.8	5.56	10.44	.250	.438	7.00	.438	.438	2.78
12X 4X	.313/.469T	19.14	169.3	36.9	398.5	4.1	2.4	10.8	5.63	12.47	.313	.438	7.00	.438	.438	2.78
9X 8X	.250/.438T	19.55	138.0	38.6	305.6	3.6	2.2	7.9	5.75	9.44	.250	.438	8.00	.469	.469	4.12
12X 5X	.313/.406T	19.65	171.2	38.8	414.1	4.2	2.4	10.7	5.78	12.41	.313	.500	.406	.406	.406	4.10
12X 4X	.313/.531T	19.99	173.3	39.8	427.7	4.2	2.5	10.7	5.88	12.53	.313	.500	.531	.531	.531	4.14
10X 8X	.250/.438T	20.40	154.5	43.5	377.4	4.0	2.4	8.7	6.00	10.44	.250	.438	8.00	.438	.438	2.78
12X 5X	.313/.469T	20.71	175.7	42.4	449.5	4.3	2.6	10.6	6.09	12.47	.313	.500	.469	.469	.469	4.12
12X 6X	.313/.406T	21.05	176.4	43.6	457.8	4.4	2.6	10.5	6.19	12.41	.313	.600	.406	.406	.406	4.10
12X 5X	.313/.531T	21.79	179.8	46.1	484.7	4.5	2.7	10.5	6.41	12.53	.313	.500	.531	.531	.531	4.14
12X 6X	.313/.469T	22.30	181.0	47.9	498.6	4.5	2.8	10.4	6.56	12.47	.313	.600	.469	.469	.469	4.12
12X 7X	.313/.406T	22.41	181.0	48.5	500.6	4.5	2.8	10.3	6.59	12.41	.313	.700	.406	.406	.406	4.10
12X 6X	.313/.531T	23.60	185.0	52.3	539.3	4.7	2.9	10.3	6.94	12.53	.313	.600	.531	.531	.531	4.14
12X 7X	.313/.469T	23.90	185.4	53.5	546.5	4.7	2.9	10.2	7.03	12.47	.313	.700	.469	.469	.469	4.12
14X 4X	.375/.469T	24.24	200.3	48.8	594.9	4.9	3.0	12.2	7.13	14.47	.375	.400	.469	.469	.469	5.68
14X 4X	.375/.531T	25.09	204.4	52.1	631.9	5.0	3.1	12.1	7.38	14.53	.375	.400	.531	.531	.531	5.71
12X 7X	.313/.531T	25.40	189.4	58.6	591.6	4.8	3.1	10.1	7.47	12.53	.313	.700	.531	.531	.531	4.14
12X 8X	.313/.469T	25.50	189.2	59.1	592.5	4.8	3.1	10.0	7.50	12.47	.313	.800	.469	.469	.469	4.12
14X 4X	.375/.594T	25.94	208.3	55.4	668.5	5.1	3.2	12.1	7.63	14.59	.375	.400	.594	.594	.594	5.73
12X 5X	.375/.656T	26.45	186.4	55.6	571.9	4.7	3.1	10.3	7.78	12.66	.375	.500	.656	.656	.656	5.76
14X 4X	.375/.656T	26.79	211.8	58.6	704.8	5.2	3.3	12.0	7.88	14.66	.375	.400	.656	.656	.656	5.76
14X 5X	.375/.531T	26.99	211.5	59.4	705.3	5.2	3.3	11.9	7.91	14.53	.375	.500	.531	.531	.531	5.71
12X 8X	.313/.531T	27.20	193.1	64.4	642.0	5.0	3.3	9.9	8.00	12.53	.313	.800	.531	.531	.531	4.14
14X 6X	.375/.531T	28.70	217.4	66.6	776.2	5.4	3.6	11.6	8.44	14.53	.375	.600	.531	.531	.531	5.71
14X 5X	.375/.656T	29.00	219.1	67.6	792.4	5.5	3.6	11.7	8.53	14.66	.375	.500	.656	.656	.656	5.76
14X 7X	.375/.469T	29.00	217.8	67.9	784.9	5.4	3.6	11.6	8.53	14.47	.375	.700	.469	.469	.469	5.68
12X 9X	.313/.531T	29.00	196.2	71.1	689.9	5.1	3.5	9.7	8.53	12.53	.313	.900	.531	.531	.531	4.14
14X 6X	.375/.594T	29.95	221.3	71.5	825.9	5.6	3.7	11.5	8.81	14.59	.375	.600	.594	.594	.594	5.73
14X 7X	.375/.531T	30.50	222.2	73.8	842.8	5.6	3.8	11.4	8.97	14.53	.375	.700	.531	.531	.531	5.71
14X 8X	.375/.469T	30.60	222.0	74.3	843.7	5.6	3.8	11.4	9.00	14.47	.375	.800	.469	.469	.469	5.68
12X 10X	.313/.531T	30.40	198.8	77.3	736.0	5.2	3.7	9.5	9.06	12.53	.313	10.00	.531	.531	.531	4.14
14X 6X	.375/.656T	31.25	225.0	76.4	875.6	5.7	3.9	11.5	9.19	14.66	.375	.600	.656	.656	.656	5.76
14X 7X	.375/.594T	31.99	226.2	79.6	899.2	5.7	4.0	11.3	9.41	14.59	.375	.700	.594	.594	.594	5.73
14X 8X	.375/.531T	32.30	226.5	81.0	907.8	5.7	4.0	11.2	9.50	14.53	.375	.800	.469	.469	.469	5.68
16X 5X	.438/.531T	32.84	243.9	75.2	989.3	6.0	4.1	13.2	9.66	16.53	.438	.500	.531	.531	.531	7.54
16X 5X	.438/.594T	33.90	248.2	79.8	1043.3	6.1	4.2	13.1	9.97	16.59	.438	.500	.594	.594	.594	7.57

0.6875 - 11/16 in.

.688 IN. PLATE (AREA= 17.96 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
		WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	THICK	WEB	FLANGE	THICK		
14X 8X	.375/ .594T	34.00	230.5	87.7	970.6	5.9	4.2	11.1	10.00	14.59	.375		8.00	.594	5.73	
14X 9X	.375/ .531T	34.10	230.1	88.2	969.9	5.9	4.2	11.0	10.03	14.53	.375		9.00	.531	5.71	
16X 6X	.438/ .531T	34.65	250.4	83.4	1077.0	6.2	4.3	12.9	10.19	16.53	.438		6.00	.531	7.54	
16X 5X	.438/ .556T	34.95	252.2	84.4	1096.6	6.2	4.3	13.0	10.28	16.66	.438		5.00	.556	7.60	
12X10X	.375/ .594T	35.50	202.1	86.9	806.6	5.3	4.0	9.3	10.44	12.59	.375		10.00	.594	5.94	
14X 8X	.375/ .656T	35.70	233.9	94.1	1029.9	6.0	4.4	10.9	10.50	14.66	.375		8.00	.656	5.76	
16X 6X	.438/ .594T	35.90	254.7	88.9	1138.5	6.3	4.5	12.8	10.56	16.59	.438		6.00	.594	7.57	
14X10X	.375/ .531T	35.90	233.3	95.3	1029.8	6.0	4.4	10.8	10.56	14.53	.375		10.00	.531	5.71	
16X 5X	.438/ .719T	36.01	255.9	89.0	1149.4	6.3	4.5	12.9	10.59	16.72	.438		5.00	.719	7.62	
14X 9X	.375/ .594T	36.01	234.0	95.6	1037.2	6.0	4.4	10.8	10.59	14.59	.375		9.00	.594	5.73	
16X 6X	.438/ .656T	37.20	258.7	94.4	1199.9	6.4	4.6	12.7	10.94	16.66	.438		6.00	.656	7.60	
18X 6X	.438/ .531T	37.60	283.6	97.7	1396.1	6.9	4.9	14.3	11.06	18.53	.438		6.00	.531	8.42	
18X 5X	.438/ .656T	37.94	285.5	98.8	1420.1	7.0	5.0	14.4	11.16	18.66	.438		5.00	.656	8.47	
14X10X	.375/ .594T	38.05	237.1	103.7	1102.0	6.1	4.6	10.6	11.19	14.59	.375		10.00	.594	5.73	
16X 6X	.438/ .719T	38.45	262.5	99.9	1259.9	6.6	4.8	12.6	11.31	16.72	.438		6.00	.719	7.62	
18X 6X	.438/ .594T	38.90	288.4	104.0	1473.1	7.1	5.1	14.2	11.44	18.59	.438		6.00	.594	8.44	
18X 5X	.438/ .719T	39.00	289.5	103.9	1484.2	7.1	5.1	14.3	11.47	18.72	.438		5.00	.719	8.50	
16X 8X	.438/ .594T	39.95	264.9	106.9	1316.3	6.7	5.0	12.3	11.75	16.59	.438		8.00	.594	7.57	
16X 9X	.438/ .531T	40.05	264.7	107.6	1317.0	6.7	5.0	12.2	11.78	16.53	.438		9.00	.531	7.54	
14X11X	.375/ .594T	40.05	239.9	111.8	1165.1	6.3	4.9	10.4	11.78	14.59	.375		11.00	.594	5.73	
18X 7X	.438/ .594T	40.90	294.5	114.0	1584.0	7.3	5.4	13.9	12.03	18.53	.438		7.00	.594	8.44	
18X 8X	.438/ .531T	41.24	294.9	115.9	1598.7	7.3	5.4	13.8	12.13	18.53	.438		8.00	.531	8.42	
18X 6X	.438/ .719T	41.45	296.8	116.2	1620.2	7.3	5.5	13.9	12.19	18.72	.438		6.00	.719	8.50	
16X10X	.438/ .531T	41.85	268.5	115.8	1393.2	6.8	5.2	12.0	12.31	16.53	.438		10.00	.531	7.54	
16X 9X	.438/ .594T	41.96	269.1	116.0	1400.5	6.8	5.2	12.1	12.34	16.59	.438		9.00	.594	7.57	
18X 7X	.438/ .656T	42.40	297.3	120.6	1659.8	7.4	5.6	13.8	12.47	18.66	.438		7.00	.656	8.47	
14X11X	.375/ .656T	42.40	243.1	120.6	1237.5	6.4	5.1	10.3	12.47	14.66	.375		11.00	.656	5.76	
18X 9X	.438/ .531T	43.04	299.6	124.9	1693.9	7.4	5.7	13.6	12.66	18.53	.438		9.00	.531	8.42	
16X10X	.438/ .594T	44.00	272.8	125.2	1482.4	6.9	5.4	11.8	12.94	16.59	.438		10.00	.594	7.57	
18X 8X	.438/ .656T	44.64	304.2	132.3	1784.1	7.6	5.9	13.5	13.13	18.66	.438		8.00	.656	8.47	
16X11X	.438/ .594T	46.00	276.0	134.0	1558.6	7.0	5.6	11.6	13.53	16.59	.438		11.00	.594	7.57	
18X 10X	.438/ .656T	46.10	276.7	134.3	1568.2	7.1	5.7	11.7	13.56	16.66	.438		10.00	.656	7.60	
18X 9X	.438/ .656T	46.85	308.9	143.5	1895.6	7.7	6.1	13.2	13.78	18.66	.438		9.00	.656	8.47	
18X10X	.438/ .594T	46.95	308.6	144.4	1896.2	7.7	6.1	13.1	13.81	18.59	.438		10.00	.594	8.44	
16X10X	.438/ .719T	48.25	280.4	143.7	1653.5	7.2	5.9	11.5	14.19	16.72	.438		10.00	.719	7.62	
16X11X	.438/ .656T	48.35	279.9	144.6	1651.6	7.2	5.9	11.4	14.22	16.66	.438		11.00	.656	7.60	
18X10X	.438/ .656T	49.10	312.9	154.6	2002.0	7.9	6.4	12.9	14.44	18.66	.438		10.00	.656	8.47	
16X11X	.438/ .719T	50.69	283.3	154.3	1739.1	7.3	6.1	11.3	14.91	16.72	.438		11.00	.719	7.62	
18X11X	.438/ .656T	51.31	316.6	165.6	2103.8	8.0	6.6	12.7	15.09	18.66	.438		11.00	.656	8.47	
21X 8X	.500/ .625T	52.70	356.9	182.5	2492.1	8.6	7.0	15.3	15.50	21.63	.500		8.00	.625	11.16	
18X12X	.438/ .656T	53.55	319.7	176.7	2201.8	8.1	6.9	12.5	15.75	18.66	.438		12.00	.656	8.47	
21X 8X	.500/ .680T	54.40	361.8	172.0	2608.5	8.8	7.2	15.2	16.00	21.69	.500		8.00	.680	11.19	
21X 8X	.500/ .750T	56.10	366.3	181.2	2720.5	8.9	7.4	15.0	16.50	21.75	.500		8.00	.750	11.22	
21X10X	.500/ .625T	56.95	367.3	186.7	2762.2	8.9	7.5	14.8	16.75	21.63	.500		10.00	.625	11.16	
21X 9X	.500/ .750T	58.65	372.0	196.0	2880.1	9.0	7.7	14.7	17.25	21.75	.500		9.00	.750	11.22	

0.6875 - 11/16 in.



0.688 IN. PLATE (AREA= 17.96 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/ .625T	59.09	371.8	199.8	2892.8	9.0	7.8	14.5	17.38	21.63	.500	11.00	.625	11.16
21X 8X .500/ .875T	59.50	374.7	200.1	2943.8	9.1	7.9	14.7	17.50	21.88	.500	8.00	.875	11.28
21X10X .500/ .750T	61.20	376.8	210.4	3029.2	9.2	8.0	14.4	18.00	21.75	.500	10.00	.750	11.22
21X11X .500/ .688T	61.40	376.7	211.9	3035.0	9.2	8.1	14.3	18.06	21.69	.500	11.00	.688	11.19
21X13X .500/ .688T	66.10	384.3	238.7	3295.1	9.4	8.6	13.8	19.44	21.69	.500	13.00	.688	11.19
21X12X .500/ .750T	66.30	385.2	239.4	3313.0	9.4	8.6	13.8	19.50	21.75	.500	12.00	.750	11.22
21X11X .500/ .875T	68.44	389.2	250.6	3440.3	9.5	8.8	13.7	20.13	21.88	.500	11.00	.875	11.28
24X 9X .625/ .750T	73.95	435.6	247.1	4010.4	10.0	9.2	16.2	21.75	24.75	.625	9.00	.750	15.90
24X10X .625/ .750T	76.58	441.6	263.4	4197.4	10.2	9.5	15.9	22.50	24.75	.625	10.00	.750	15.90
24X11X .625/ .750T	79.05	447.0	279.4	4373.6	10.3	9.8	15.7	23.25	24.75	.625	11.00	.750	15.90
24X10X .625/ .875T	80.75	451.4	289.0	4505.2	10.4	10.0	15.6	23.75	24.88	.625	10.00	.875	15.98
24X 9X .625/1.125T	85.44	462.0	316.4	4848.4	10.6	10.5	15.3	25.13	25.13	.625	9.00	1.125	16.14
24X13X .625/ .875T	89.69	466.3	345.2	5071.3	10.7	10.9	14.7	26.38	24.88	.625	13.00	.875	15.98
24X14X .625/ .875T	92.65	470.4	364.0	5246.3	10.8	11.2	14.4	27.25	24.88	.625	14.00	.875	15.98
24X11X .625/1.125T	93.09	473.4	364.3	5315.5	10.8	11.2	14.4	27.38	25.13	.625	11.00	1.125	16.14
24X12X .625/1.125T	96.90	478.2	388.1	5530.7	10.9	11.6	14.3	28.50	25.13	.625	12.00	1.125	16.14
27X 9X .688/1.125T	97.55	531.6	374.4	6330.6	11.6	11.9	16.9	28.69	28.13	.688	9.00	1.125	19.83
24X16X .625/ .875T	98.60	477.6	401.1	5574.0	10.9	11.7	13.9	29.00	24.88	.625	16.00	.875	15.98
27X12X .688/ .875T	98.80	531.9	386.0	6390.1	11.7	12.0	16.6	29.06	27.88	.688	12.00	.875	19.65
27X13X .688/ .875T	101.80	537.3	406.8	6613.5	11.8	12.3	16.3	29.94	27.88	.688	13.00	.875	19.65
27X11X .688/1.125T	105.20	545.4	427.6	6907.6	11.9	12.7	16.2	30.94	28.13	.688	11.00	1.125	19.83
30X13X .750/ .875T	115.19	613.1	473.5	8433.9	12.8	13.8	17.8	33.88	30.88	.750	13.00	.875	23.68
27X14X .688/1.125T	116.65	561.3	506.2	7670.3	12.1	13.7	15.2	34.31	28.13	.688	14.00	1.125	19.83
30X11X .750/1.125T	118.59	622.3	496.2	8783.9	12.9	14.1	17.7	34.88	31.13	.750	11.00	1.125	23.86
27X15X .688/1.125T	120.50	565.8	533.0	7909.0	12.2	14.0	14.8	35.44	28.13	.688	15.00	1.125	19.83
30X12X .750/1.125T	122.40	629.3	525.4	9110.3	13.0	14.5	17.3	36.00	31.13	.750	12.00	1.125	23.86
30X16X .750/ .875T	124.10	629.6	541.4	9188.5	13.0	14.6	17.0	36.50	30.88	.750	16.00	.875	23.68
27X16X .688/1.125T	124.30	569.8	558.8	8130.0	12.2	14.3	14.6	36.56	28.13	.688	16.00	1.125	19.83
30X14X .750/1.125T	130.05	641.6	582.9	9717.4	13.1	15.1	16.7	38.25	31.13	.750	14.00	1.125	23.86
30X10X .875/1.375T	136.00	649.8	546.7	9520.9	12.8	14.7	17.4	40.00	31.38	.875	10.00	1.375	28.06
33X12X .875/1.125T	144.09	723.0	614.4	11564.7	13.8	16.0	18.8	42.38	34.13	.875	12.00	1.125	38.47
33X10X .875/1.375T	144.94	727.5	616.9	11705.3	13.9	16.1	19.0	42.63	34.13	.875	10.00	1.375	38.47
36X10X .875/1.125T	145.35	783.5	619.4	13081.4	14.7	16.7	21.1	42.75	37.13	.875	10.00	1.125	33.09
33X11X .875/1.375T	149.60	736.8	654.9	12159.1	14.0	16.5	18.6	44.00	34.38	.875	11.00	1.375	30.68
33X14X .875/1.125T	151.74	738.0	676.1	12284.5	14.0	16.6	18.2	44.63	34.13	.875	14.00	1.125	38.47
36X10X .875/1.500T	158.10	818.7	725.4	14687.6	15.1	17.9	28.2	46.50	37.50	.875	10.00	1.500	33.41
36X14X .875/1.375T	172.55	844.8	853.3	16159.7	15.3	19.1	18.9	50.75	37.38	.875	14.00	1.375	33.31
36X15X .875/1.500T	183.60	863.3	946.4	17240.4	15.5	20.0	18.2	54.00	37.50	.875	15.00	1.500	33.41

0.6875 - 11/16 in.

.750 IN. PLATE (AREA= 21.38 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	Yp	YF	***** BEAM DIMENSIONS *****				SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	AREA				DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK		
3X 2X .125/.188T	2.55	15.0	2.0	7.0	.6	.5	3.5	.75	3.19	.125	2.00	.100	.49
4X 2X .125/.188T	2.99	23.1	2.6	11.7	.7	.5	4.4	.88	4.19	.125	2.00	.100	.62
3X 3X .125/.188T	3.20	18.5	2.7	9.1	.6	.5	3.4	.94	3.19	.125	3.00	.100	.49
3X 5X 2X .125/.188T	3.40	33.0	3.3	18.0	.9	.5	5.4	1.00	5.19	.125	2.00	.100	.74
4X 4X 3X .125/.188T	3.60	27.9	3.4	15.1	.8	.5	4.4	1.06	4.19	.125	3.00	.100	.62
5X 3X .125/.188T	4.05	39.4	4.4	23.3	1.0	.6	5.3	1.19	5.19	.125	3.00	.100	.74
4X 2X .188/.313T	4.69	31.5	4.1	18.2	.9	.6	4.5	1.38	4.31	.188	2.00	.313	.95
3X 3X .188/.313T	5.10	25.3	4.1	14.3	.8	.6	3.5	1.50	3.31	.188	3.00	.313	.76
5X 2X .188/.313T	5.30	43.7	5.2	28.1	1.1	.6	5.4	1.56	5.31	.188	2.00	.313	1.14
6X 2X .188/.313T	5.95	57.6	6.5	41.2	1.3	.7	6.3	1.75	6.31	.188	2.00	.313	1.33
7X 2X .188/.250T	6.15	67.2	7.0	50.8	1.5	.8	7.2	1.81	7.25	.188	2.00	.250	1.50
5X 3X .188/.250T	6.39	51.6	6.9	36.9	1.3	.7	5.3	1.88	5.31	.188	3.00	.313	1.14
6X 4X .188/.250T	6.60	52.4	7.2	38.1	1.3	.7	5.3	1.94	5.25	.188	4.00	.250	1.13
7X 3X .188/.250T	7.00	76.1	8.8	63.3	1.6	.8	7.2	2.06	7.25	.188	3.00	.250	1.50
6X 4X .188/.250T	7.24	67.7	8.9	55.1	1.5	.8	6.2	2.13	6.25	.188	4.00	.313	1.32
5X 4X .188/.313T	7.45	57.5	8.5	45.1	1.4	.8	5.3	2.19	5.31	.188	4.00	.313	1.14
7X 3X .188/.313T	7.65	82.1	10.2	73.0	1.8	.9	7.2	2.25	7.31	.188	3.00	.313	1.52
6X 4X .188/.250T	7.85	83.4	10.7	75.6	1.8	.9	7.1	2.31	7.25	.188	4.00	.250	1.50
7X 4X .188/.313T	8.09	73.4	10.5	64.6	1.6	.9	6.2	2.38	6.31	.188	4.00	.313	1.33
8X 7X 4X .188/.313T	8.70	89.8	12.4	88.0	1.9	1.0	7.1	2.56	7.31	.188	4.00	.313	1.52
6X 5X .188/.313T	9.15	79.2	12.4	75.9	1.8	1.0	6.1	2.69	6.31	.188	5.00	.313	1.33
9X 55X .438T	9.55	76.3	11.5	71.8	1.7	.9	6.2	2.81	6.44	.250	3.00	.438	1.80
7X 5X .188/.313T	9.79	96.3	14.8	103.2	2.1	1.1	7.0	2.88	7.31	.188	5.00	.313	1.52
6X 4X .250/.375T	10.20	79.1	12.7	78.0	1.8	1.0	6.1	3.00	6.38	.250	4.00	.375	1.74
7X 3X .250/.438T	10.40	92.9	13.8	98.4	2.0	1.1	7.1	3.06	7.44	.250	3.00	.438	2.05
8X 3X .250/.375T	10.64	105.5	14.9	118.9	2.2	1.1	8.0	3.13	8.38	.250	3.00	.375	2.28
9X 3X .250/.313T	10.85	117.0	15.6	138.8	2.4	1.2	8.9	3.19	9.31	.250	3.00	.313	2.52
8X 4X .250/.313T	11.05	108.0	15.9	125.7	2.3	1.2	7.9	3.25	8.31	.250	4.00	.313	2.27
8X 3X .250/.438T	11.25	110.1	16.3	130.5	2.3	1.2	8.0	3.31	8.44	.250	3.00	.438	2.30
9X 3X .250/.375T	11.49	122.5	17.3	153.6	2.5	1.3	8.9	3.38	9.38	.250	3.00	.375	2.53
10X 3X .250/.313T	11.70	134.1	18.1	176.4	2.7	1.3	9.7	3.44	10.31	.250	3.00	.313	2.77
8X 4X .250/.375T	11.90	113.5	17.9	141.0	2.4	1.2	7.9	3.50	8.38	.250	4.00	.375	2.28
9X 3X .250/.438T	12.10	127.5	19.0	168.2	2.6	1.3	8.9	3.56	9.44	.250	3.00	.438	2.55
10X 3X .250/.375T	12.34	139.7	19.9	194.1	2.8	1.4	9.7	3.63	10.38	.250	3.00	.375	2.78
10X 4X .250/.313T	12.75	142.7	21.3	204.6	2.9	1.4	9.6	3.75	10.31	.250	4.00	.313	2.77
9X 5X .250/.313T	12.95	132.1	21.4	185.1	2.7	1.4	8.7	3.81	9.31	.250	5.00	.313	2.52
8X 5X .250/.375T	13.19	120.2	21.0	163.4	2.5	1.4	7.8	3.88	8.38	.250	5.00	.375	2.28
10X 4X .250/.375T	13.60	149.0	23.7	227.9	3.0	1.5	9.6	4.00	10.38	.250	4.00	.375	2.78
10X 5X .250/.313T	13.80	149.8	24.4	232.0	3.0	1.5	9.5	4.06	10.31	.250	5.00	.313	2.77
9X 5X .250/.375T	14.04	138.2	24.2	208.5	2.9	1.5	8.6	4.13	9.38	.250	5.00	.375	2.53
8X 5X .250/.438T	14.25	125.1	23.5	181.8	2.7	1.5	7.7	4.19	8.44	.250	5.00	.438	2.30
10X 4X .250/.438T	14.45	154.4	26.2	258.6	3.1	1.6	9.6	4.25	10.44	.250	4.00	.438	2.80
9X 5X .250/.375T	14.89	156.2	27.5	268.4	3.2	1.7	9.5	4.38	10.38	.250	5.00	.375	2.78
9X 5X .250/.438T	15.10	143.6	27.0	231.7	3.0	1.6	8.6	4.44	9.44	.250	5.00	.438	2.55
9X 6X .250/.375T	15.30	143.8	27.6	234.4	3.0	1.6	8.5	4.50	9.38	.250	6.00	.375	2.53

0.7500 - 3/4 in.



.750 IN. PLATE (AREA= 21.38 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
8X 6X .250/ .438T	15.74	130.5	27.1	206.1	2.8	1.6	7.6	4.63	8.44	.250	6.00	.438	2.30
10X 5X .250/ .438T	15.95	162.0	30.7	208.5	3.3	1.8	9.4	4.69	10.44	.250	5.00	.438	2.80
10X 6X .250/ .375T	16.15	162.4	31.3	292.3	3.3	1.8	9.3	4.75	10.38	.250	6.00	.375	2.78
9X 7X .250/ .375T	16.59	148.7	31.0	260.1	3.1	1.7	8.4	4.88	9.38	.250	7.00	.375	2.53
8X 7X .250/ .438T	17.20	134.9	30.6	229.4	2.9	1.7	7.5	5.06	8.44	.250	7.00	.438	2.30
10X 7X .250/ .375T	17.44	167.5	35.2	323.4	3.5	1.9	9.2	5.13	10.38	.250	7.00	.375	2.78
9X 7X .250/ .438T	18.05	154.0	35.0	290.5	3.3	1.9	8.3	5.31	9.44	.250	7.00	.438	2.55
10X 4X .313/ .563T	18.29	163.6	33.0	310.9	3.4	1.9	9.4	5.38	10.56	.313	4.00	.563	3.54
12X 4X .313/ .406T	18.29	168.0	34.4	382.6	3.8	2.0	11.1	5.38	12.41	.313	4.00	.406	4.12
8X 8X .250/ .438T	18.70	138.6	34.2	252.1	3.1	1.8	7.4	5.50	8.44	.250	8.00	.438	2.30
10X 7X .250/ .438T	19.90	173.0	39.4	359.3	3.7	2.1	9.1	5.56	10.44	.250	7.00	.438	2.80
12X 4X .313/ .469T	19.14	193.3	37.3	413.2	3.9	2.1	11.1	5.63	12.47	.313	4.00	.469	4.14
9X 8X .250/ .438T	19.55	157.9	39.0	318.5	3.4	2.0	8.2	5.75	9.44	.250	8.00	.438	2.55
12X 5X .313/ .406T	19.65	195.7	39.2	429.7	4.0	2.2	11.0	5.78	12.41	.313	5.00	.406	4.12
12X 4X .313/ .531T	19.93	198.2	40.2	443.9	4.0	2.2	11.0	5.88	12.53	.313	5.00	.531	4.16
10X 8X .250/ .438T	20.40	177.2	43.8	393.4	3.8	2.2	9.0	6.00	10.44	.250	8.00	.438	2.80
12X 5X .313/ .469T	20.71	201.3	42.9	467.1	4.1	2.3	10.9	6.03	12.47	.313	5.00	.469	4.14
12X 6X .313/ .406T	21.05	202.1	44.0	475.9	4.2	2.4	10.3	6.19	12.41	.313	6.00	.406	4.12
12X 5X .313/ .531T	21.79	206.2	46.5	504.3	4.3	2.4	10.8	6.41	12.53	.313	5.00	.531	4.16
12X 6X .313/ .469T	22.30	207.7	48.4	519.2	4.3	2.5	10.7	6.56	12.47	.313	6.00	.469	4.14
12X 7X .313/ .406T	22.41	207.8	48.9	521.3	4.3	2.5	10.7	6.59	12.41	.313	7.00	.406	4.12
12X 6X .313/ .531T	23.60	212.8	52.9	562.4	4.5	2.6	10.6	6.94	12.53	.313	6.00	.531	4.16
12X 7X .313/ .469T	23.90	213.3	54.1	570.2	4.5	2.7	10.5	7.03	12.47	.313	7.00	.469	4.14
14X 4X .375/ .469T	24.24	229.7	49.4	619.0	4.7	2.7	12.5	7.13	14.47	.375	4.00	.469	5.71
14X 4X .375/ .531T	25.09	234.7	52.8	658.2	4.8	2.8	12.5	7.38	14.53	.375	4.00	.531	5.73
12X 7X .313/ .531T	25.40	218.2	59.2	618.5	4.6	2.8	10.4	7.47	12.53	.313	7.00	.531	4.16
12X 8X .313/ .469T	25.50	218.0	59.7	619.4	4.6	2.8	10.4	7.50	12.47	.313	8.00	.469	4.14
14X 4X .375/ .594T	25.94	239.3	56.1	697.0	4.9	2.9	12.4	7.63	14.59	.375	4.00	.594	5.75
12X 5X .375/ .656T	26.45	214.4	56.3	597.8	4.5	2.8	10.6	7.78	12.66	.375	5.00	.656	5.03
14X 4X .375/ .656T	26.79	243.6	59.4	735.4	5.0	3.0	12.4	7.88	14.66	.375	4.00	.656	5.78
14X 5X .375/ .531T	26.89	243.2	60.1	736.1	5.0	3.0	12.3	7.91	14.53	.375	5.00	.531	5.73
12X 8X .313/ .531T	27.20	222.9	65.5	672.6	4.8	3.0	10.3	8.00	12.53	.313	8.00	.531	4.16
14X 6X .375/ .531T	28.70	250.5	67.4	811.8	5.2	3.2	12.0	8.44	14.53	.375	6.00	.531	5.73
14X 5X .375/ .656T	29.00	252.5	68.4	829.0	5.3	3.3	12.1	8.53	14.66	.375	5.00	.656	5.78
14X 7X .375/ .469T	29.00	251.0	68.7	821.2	5.2	3.3	11.9	8.53	14.47	.375	7.00	.469	5.71
12X 9X .313/ .531T	29.00	226.7	71.8	724.4	4.9	3.2	10.1	8.53	12.53	.313	9.00	.531	4.16
14X 6X .375/ .594T	29.95	255.3	72.4	865.0	5.4	3.4	12.0	8.81	14.59	.375	6.00	.594	5.75
14X 7X .375/ .531T	30.50	256.4	74.6	883.2	5.4	3.4	11.8	8.97	14.53	.375	7.00	.531	5.73
14X 8X .375/ .469T	30.60	256.2	75.1	884.3	5.4	3.5	11.8	9.00	14.47	.375	8.00	.469	5.71
12X 10X .313/ .531T	30.80	230.1	78.1	774.4	5.0	3.4	9.9	9.06	12.53	.313	10.00	.531	4.16
14X 6X .375/ .656T	31.25	259.7	77.3	918.3	5.5	3.5	11.9	9.19	14.66	.375	6.00	.656	5.78
14X 7X .375/ .594T	31.99	261.2	80.5	943.8	5.5	3.6	11.7	9.41	14.59	.375	7.00	.594	5.75
14X 8X .375/ .531T	32.30	261.6	81.9	953.3	5.6	3.6	11.6	9.50	14.53	.375	8.00	.531	5.73
16X 5X .438/ .531T	32.84	280.9	76.2	1035.9	5.8	3.7	13.6	9.66	16.53	.438	5.00	.531	7.57
16X 5X .438/ .594T	33.90	285.3	80.9	1093.5	5.9	3.8	13.5	9.97	16.59	.438	5.00	.594	7.59

0.7500 - 3/4 in.

.750 IN. PLATE (AREA= 21.38 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL							WEB THICK	WIDTH	FLANGE THICK	
14X 8X .375/.594T	34.00	266.5	88.7	1021.0	5.7	3.8	11.5	10.00	14.59	.375	8.00	.594	5.75
14X 9X .375/.531T	34.10	266.1	99.2	1020.4	5.7	3.8	11.4	10.03	14.53	.375	9.00	.531	5.73
16X 6X .438/.531T	34.65	288.6	84.5	1129.7	6.0	3.9	13.4	10.19	16.53	.438	6.00	.531	7.57
16X 5X .438/.656T	34.35	290.7	85.5	1150.7	6.0	4.0	13.5	10.28	16.66	.438	5.00	.656	7.63
12X10X .375/.594T	35.50	233.9	87.8	851.8	5.2	3.6	9.7	10.44	12.59	.375	10.00	.594	5.00
14X 8X .375/.656T	35.70	270.6	95.2	1095.3	5.8	4.0	11.4	10.50	14.66	.375	8.00	.656	5.78
16X 6X .438/.594T	35.90	293.8	90.1	1195.7	6.1	4.1	13.3	10.56	16.59	.438	6.00	.594	7.59
14X10X .375/.531T	35.90	270.0	96.4	1085.4	5.8	4.0	11.3	10.56	14.53	.375	10.00	.531	5.73
16X 5X .438/.719T	36.01	295.1	90.2	1207.1	6.1	4.1	13.4	10.59	16.72	.438	5.00	.719	7.65
14X 9X .375/.594T	36.01	270.8	96.7	1093.4	5.8	4.0	11.3	10.59	14.59	.375	9.00	.594	5.75
16X 6X .438/.656T	37.20	298.5	95.7	1261.6	6.2	4.2	13.2	10.94	16.66	.438	6.00	.656	7.63
18X 6X .438/.531T	37.60	327.1	99.1	1466.0	6.7	4.5	14.8	11.06	18.53	.438	6.00	.531	8.44
18X 5X .438/.656T	37.94	329.2	100.2	1491.4	6.8	4.5	14.9	11.16	18.66	.438	5.00	.656	8.50
14X10X .375/.594T	38.05	274.6	104.9	1164.1	6.0	4.2	11.1	11.19	14.59	.375	10.00	.594	5.75
16X 6X .438/.719T	38.45	303.0	101.3	1326.3	6.4	4.4	13.1	11.31	16.72	.438	6.00	.719	7.65
18X 6X .438/.594T	38.90	332.7	105.4	1548.5	6.9	4.7	14.7	11.44	18.59	.438	6.00	.594	8.47
18X 5X .438/.719T	39.00	333.9	105.4	1560.2	6.9	4.7	14.8	11.47	18.72	.438	5.00	.719	8.53
16X 8X .438/.594T	39.95	306.1	108.4	1387.7	6.5	4.5	12.8	11.75	16.59	.438	8.00	.594	7.59
16X 9X .438/.531T	40.05	305.8	109.0	1388.6	6.5	4.5	12.7	11.78	16.53	.438	9.00	.531	7.57
14X11X .375/.594T	40.05	278.1	113.1	1233.2	6.1	4.4	10.9	11.78	14.59	.375	11.00	.594	5.75
18X 7X .438/.594T	40.90	339.9	115.6	1668.1	7.1	4.9	14.4	12.03	18.59	.438	7.00	.594	8.47
18X 8X .438/.531T	41.24	340.5	117.5	1684.1	7.1	4.9	14.3	12.03	18.53	.438	8.00	.531	8.44
18X 6X .438/.719T	41.45	342.6	117.8	1707.0	7.1	5.0	14.5	12.13	18.72	.438	6.00	.719	8.53
16X10X .438/.531T	41.85	310.4	117.3	1471.4	6.6	4.7	12.5	12.31	16.53	.438	10.00	.531	7.57
16X 9X .438/.594T	41.96	311.1	117.5	1479.1	6.6	4.8	12.6	12.34	16.59	.438	9.00	.594	7.59
18X 7X .438/.656T	42.40	343.5	122.3	1750.6	7.2	5.1	14.3	12.47	18.66	.438	7.00	.656	8.50
14X11X .375/.531T	42.40	282.0	122.0	1312.7	6.2	5.2	14.1	12.66	14.56	.375	11.00	.531	5.78
16X10X .438/.594T	43.04	346.1	126.6	1787.2	7.2	5.0	12.4	12.94	16.59	.438	10.00	.594	7.59
18X 9X .438/.531T	44.00	315.6	126.8	1568.5	6.8	5.0	12.4	12.94	16.53	.438	9.00	.531	8.44
18X 8X .438/.656T	44.64	351.5	134.2	1884.8	7.4	5.4	14.0	13.13	18.66	.438	8.00	.656	8.50
16X11X .438/.594T	46.00	319.4	135.8	1651.9	6.9	5.2	12.2	13.53	16.59	.438	11.00	.594	7.59
16X10X .438/.656T	46.10	320.3	136.0	1652.2	6.9	5.2	12.2	13.56	16.66	.438	10.00	.656	7.63
18X 9X .438/.594T	46.85	357.1	145.5	2006.3	7.6	5.6	13.8	13.78	18.66	.438	9.00	.594	8.50
18X10X .438/.594T	46.95	356.9	146.3	2007.2	7.6	5.6	13.7	13.81	18.59	.438	10.00	.594	8.47
16X10X .438/.719T	48.25	324.6	145.6	1755.7	7.0	5.4	12.1	14.13	16.72	.438	10.00	.719	7.65
16X11X .438/.656T	48.35	324.2	146.2	1753.9	7.0	5.4	12.0	14.22	16.66	.438	11.00	.656	7.63
18X10X .438/.656T	49.10	362.0	156.7	2122.8	7.7	5.9	13.5	14.44	18.66	.438	10.00	.656	8.50
16X11X .438/.719T	50.69	328.3	156.4	1850.3	7.1	5.6	11.8	14.91	16.72	.438	11.00	.719	7.65
18X11X .438/.656T	51.31	366.3	167.9	2234.7	7.8	6.1	13.3	15.09	18.66	.438	11.00	.656	8.50
21X 8X .500/.625T	52.70	411.2	165.2	2637.0	9.5	6.3	16.0	15.50	21.63	.500	8.00	.625	11.19
18X12X .438/.656T	53.55	370.1	179.1	2342.8	7.9	6.3	13.1	15.75	18.66	.438	12.00	.656	8.50
21X 8X .500/.688T	54.40	417.0	174.8	2763.4	8.6	6.6	15.8	16.00	21.69	.500	8.00	.688	11.22
21X 8X .500/.750T	56.10	422.2	184.2	2885.3	8.7	6.8	15.7	16.50	21.75	.500	8.00	.750	11.25
21X10X .500/.625T	56.95	423.4	189.7	2931.4	8.8	6.9	15.5	16.75	21.63	.500	10.00	.625	11.19
21X 9X .500/.750T	58.65	428.9	199.1	3059.8	8.9	7.1	15.4	17.25	21.75	.500	9.00	.750	11.25

0.7500 - 3/4 in.



.750 IN. PLATE (AREA= 21.38 SQ.IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WEB	WIDTH	FLANGE	THICK	THICK	THICK	THICK	THICK	THICK	AREA	AREA
21X11X .500/ .625	59.09	428.7	202.1	3074.4	8.9	7.2	15.2	17.38	21.63	.500	.500	11.00	.625	.625	11.19	.625	11.00	.625	11.19	11.19	11.19
21X 8X .500/ .875	59.50	432.1	203.3	3129.0	9.0	7.2	15.4	17.50	21.68	.500	.500	8.00	.875	.875	11.32	.875	8.00	.875	11.32	11.32	11.32
21X10X .500/ .750	61.20	434.6	213.7	3223.5	9.0	7.4	15.1	18.00	21.75	.500	.500	10.00	.750	.750	11.25	.750	10.00	.750	11.25	11.25	11.25
21X11X .500/ .688	61.40	434.5	215.3	3230.2	9.1	7.4	15.0	18.06	21.69	.500	.500	11.00	.688	.688	11.22	.688	11.00	.688	11.22	11.22	11.22
21X13X .500/ .688	66.10	443.5	242.4	3517.4	9.3	7.9	14.5	19.44	21.69	.500	.500	13.00	.688	.688	11.22	.688	13.00	.688	11.22	11.22	11.22
21X12X .500/ .750	66.30	444.4	243.2	3536.7	9.3	8.0	14.5	19.50	21.75	.500	.500	12.00	.750	.750	11.25	.750	12.00	.750	11.25	11.25	11.25
21X11X .500/ .875	68.44	449.2	254.6	3677.1	9.4	8.2	14.4	20.13	21.88	.500	.500	11.00	.875	.875	11.32	.875	11.00	.875	11.32	11.32	11.32
24X 9X .625/ .750	73.95	499.1	251.9	4268.7	9.9	8.6	16.9	21.75	24.75	.625	.625	9.00	.750	.750	15.94	.750	9.00	.750	15.94	15.94	15.94
24X10X .625/ .750	76.50	506.1	268.5	4473.2	10.1	8.8	16.7	22.50	24.75	.625	.625	10.00	.750	.750	15.94	.625	10.00	.750	15.94	15.94	15.94
24X11X .625/ .750	79.05	512.3	284.7	4666.6	10.2	9.1	16.4	23.25	24.75	.625	.625	11.00	.750	.750	15.94	.625	11.00	.750	15.94	15.94	15.94
24X10X .625/ .875	80.75	517.3	294.6	4810.5	10.3	9.3	16.3	23.75	24.88	.625	.625	10.00	.875	.875	16.02	.875	10.00	.875	16.02	16.02	16.02
24X 9X .625/ .875	85.44	529.5	322.5	5187.1	10.6	9.8	16.1	25.13	25.13	.625	.625	9.00	.875	.875	16.02	.625	9.00	.875	16.02	16.02	16.02
24X13X .625/ .875	89.69	534.4	351.7	5436.4	10.7	10.2	15.5	26.38	24.88	.625	.625	13.00	.875	.875	16.02	.625	13.00	.875	16.02	16.02	16.02
24X14X .625/ .875	92.65	539.2	370.8	5631.0	10.8	10.4	15.2	27.25	24.88	.625	.625	14.00	.875	.875	16.02	.625	14.00	.875	16.02	16.02	16.02
24X11X .625/ .1.25	93.09	542.6	371.3	5705.5	10.8	10.5	15.4	27.38	25.13	.625	.625	11.00	.875	.875	16.10	.625	11.00	.875	16.10	16.10	16.10
24X12X .625/ .1.25	96.90	548.1	395.5	5945.4	10.9	10.8	15.0	28.50	25.13	.625	.625	12.00	.875	.875	16.10	.625	12.00	.875	16.10	16.10	16.10
27X 9X .688/ .1.25	97.55	606.2	382.3	6770.7	11.6	11.2	17.7	28.69	28.13	.688	.688	9.00	.875	.875	19.87	.688	9.00	.875	19.87	19.87	19.87
24X16X .625/ .875	98.60	547.5	408.6	5996.8	10.9	11.0	14.7	29.00	24.88	.625	.625	16.00	.875	.875	16.02	.625	16.00	.875	16.02	16.02	16.02
27X13X .688/ .875	98.80	606.6	415.1	7005.0	11.6	11.3	17.4	29.06	27.88	.688	.688	13.00	.875	.875	19.70	.688	13.00	.875	19.70	19.70	19.70
27X11X .688/ .1.25	101.80	612.7	415.1	7005.0	11.8	11.6	17.1	29.94	27.88	.688	.688	13.00	.875	.875	19.70	.688	13.00	.875	19.70	19.70	19.70
27X11X .688/ .1.25	105.20	621.9	436.5	7407.7	11.9	11.9	17.0	30.94	28.13	.688	.688	11.00	.875	.875	19.87	.688	11.00	.875	19.87	19.87	19.87
30X13X .750/ .875	115.19	695.6	484.0	9027.3	12.8	13.0	18.7	33.88	30.88	.750	.750	13.00	.875	.875	23.72	.750	13.00	.875	23.72	23.72	23.72
27X14X .688/ .1.25	116.65	640.1	516.6	8255.9	12.2	12.9	16.0	34.31	28.13	.688	.688	14.00	.875	.875	19.87	.688	14.00	.875	19.87	19.87	19.87
30X11X .750/ .1.25	118.59	705.9	507.3	9409.8	12.9	13.3	18.5	34.88	31.13	.750	.750	11.00	.875	.875	23.91	.750	11.00	.875	23.91	23.91	23.91
27X15X .688/ .1.25	120.50	645.2	543.9	8522.9	12.2	13.2	15.7	35.44	28.13	.688	.688	15.00	.875	.875	19.87	.688	15.00	.875	19.87	19.87	19.87
30X12X .750/ .1.25	122.40	713.8	537.0	9769.7	13.0	13.7	18.2	36.00	31.13	.750	.750	12.00	.875	.875	23.91	.750	12.00	.875	23.91	23.91	23.91
30X16X .750/ .875	124.10	714.2	553.1	9859.2	13.1	13.8	17.8	36.50	30.88	.750	.750	16.00	.875	.875	23.72	.750	16.00	.875	23.72	23.72	23.72
27X16X .688/ .1.25	124.30	649.8	570.2	8770.7	12.3	13.5	15.4	36.56	28.13	.688	.688	16.00	.875	.875	19.87	.688	16.00	.875	19.87	19.87	19.87
30X14X .750/ .1.25	130.05	727.6	595.7	10441.7	13.2	14.4	17.5	38.25	31.13	.750	.750	14.00	.875	.875	23.91	.750	14.00	.875	23.91	23.91	23.91
30X10X .750/ .375	136.00	733.3	559.7	10199.3	12.9	13.9	18.2	40.00	31.38	.750	.750	10.00	.875	.875	20.11	.750	10.00	.875	20.11	20.11	20.11
33X12X .875/ .1.25	144.09	813.8	623.2	12376.3	13.9	15.2	19.7	42.38	34.13	.875	.875	12.00	.875	.875	30.52	.875	12.00	.875	30.52	30.52	30.52
33X10X .875/ .1.375	144.94	818.6	631.9	12528.1	14.0	15.3	19.8	42.63	34.38	.875	.875	10.00	.875	.875	30.74	.875	10.00	.875	30.74	30.74	30.74
36X10X .875/ .1.25	145.35	879.6	634.8	13966.8	14.8	15.9	22.0	42.75	37.13	.875	.875	10.00	.875	.875	33.15	.875	10.00	.875	33.15	33.15	33.15
33X11X .875/ .375	149.60	829.1	670.7	13024.7	14.1	15.7	19.4	44.00	34.38	.875	.875	11.00	.875	.875	30.74	.875	11.00	.875	30.74	30.74	30.74
33X14X .875/ .1.25	151.74	830.4	692.1	13166.0	14.1	15.9	19.0	44.63	34.13	.875	.875	14.00	.875	.875	30.52	.875	14.00	.875	30.52	30.52	30.52
36X10X .875/ .1.500	158.10	918.5	743.3	15714.2	15.2	17.1	21.1	46.50	37.50	.875	.875	10.00	.875	.875	33.47	.875	10.00	.875	33.47	33.47	33.47
36X14X .875/ .375	172.55	947.4	873.7	17331.7	15.5	18.3	19.8	50.75	37.38	.875	.875	14.00	.875	.875	33.36	.875	14.00	.875	33.36	33.36	33.36
36X15X .875/ .1.500	183.60	968.0	968.9	18521.2	15.7	19.1	19.1	54.00	37.50	.875	.875	15.00	.875	.875	33.47	.875	15.00	.875	33.47	33.47	33.47

0.7500 - 3/4 in.

0.875 IN. PLATE (AREA= 29.09 SQ. IN.)

NOMINAL SIZE				SECTION MODULUS				DIMENSIONS				BEAM				*****																															
WT/FI				ZPL				ZEL				INERTIA				R				YP				VF				AREA				DEPTH				WEB				FLANGE				SHEAR			
3X 2X				125/				188T				8.1				.5				3.6				.75				3.19				.125				2.00				.188				.51			
3X 2X				125/				188T				13.0				.7				4.5				.88				4.19				.125				2.00				.188				.63			
3X 3X				125/				188T				10.4				.6				3.5				.94				3.19				.125				3.00				.188				.51			
5X 2X				125/				188T				19.5				.8				6				1.00				5.19				.125				2.00				.188				.63			
5X 3X				125/				188T				16.5				.7				6				1.06				4.19				.125				3.00				.188				.63			
4X 3X				125/				188T				25.0				.9				6				1.19				5.19				.125				3.00				.188				.76			
4X 2X				188/				313T				19.8				.8				6				1.38				4.31				.188				2.00				.313				.97			
3X 3X				188/				313T				15.9				.7				6				1.50				3.31				.188				3.00				.313				.79			
5X 2X				188/				313T				30.1				1.0				.6				1.56				5.31				.188				2.00				.313				1.16			
6X 2X				188/				313T				43.7				1.2				.7				1.75				6.31				.188				2.00				.313				1.35			
7X 2X				188/				250T				53.5				1.3				.7				1.81				7.25				.188				2.00				.250				1.53			
5X 3X				188/				313T				39.3				1.1				.7				1.88				5.31				.188				3.00				.313				1.16			
5X 4X				188/				250T				40.6				1.1				.7				1.94				5.25				.188				4.00				.250				1.15			
7X 3X				188/				250T				66.6				1.5				.8				2.06				7.25				.188				3.00				.250				1.53			
6X 4X				188/				250T				58.3				1.4				.8				2.13				6.25				.188				4.00				.250				1.34			
7X 4X				188/				313T				48.0				1.2				.7				2.19				5.31				.188				4.00				.313				1.16			
7X 3X				188/				313T				76.8				1.6				.8				2.25				7.31				.188				3.00				.313				1.54			
6X 4X				188/				250T				79.6				1.6				.8				2.31				7.25				.188				4.00				.250				1.53			
6X 4X				188/				313T				68.3				1.5				.8				2.38				6.31				.188				4.00				.313				1.35			
7X 4X				188/				313T				92.7				1.7				.9				2.56				7.31				.188				4.00				.313				1.54			
6X 5X				188/				313T				80.3				1.6				.9				2.69				6.31				.188				5.00				.313				1.35			
6X 3X				250/				438T				76.1				1.5				.9				2.81				6.44				.250				3.00				.438				1.83			
7X 5X				188/				313T				108.8				1.8				1.0				7.2				7.31				.188				5.00				.313				1.54			
6X 4X				250/				375T				82.7				1.6				.9				6.3				6.38				.250				4.00				.375				1.81			
7X 3X				250/				438T				104.0				1.8				1.0				7.4				3.06				.250				3.00				.438				2.08			
8X 3X				250/				375T				125.1				2.0				1.0				8.33				8.38				.250				3.00				.375				2.31			
9X 3X				250/				313T				145.7				2.1				1.1				9.1				9.31				.250				3.00				.313				2.55			
8X 4X				250/				313T				132.4				2.0				1.0				8.1				8.31				.250				4.00				.313				2.30			
8X 3X				250/				438T				137.5				2.1				1.1				8.3				3.31				.250				3.00				.438				2.33			
9X 3X				250/				375T				161.4				2.2				1.1				9.1				3.38				.250				3.00				.375				2.56			
8X 4X				250/				375T				145.1				2.1				1.1				8.1				3.50				.250				4.00				.375				2.31			
9X 3X				250/				438T				177.0				2.3				1.2				9.1				3.56				.250				3.00				.438				2.58			
10X 3X				250/				375T				203.8				2.5				1.2				10.0				3.63				.250				3.00				.375				2.81			
10X 4X				250/				313T				215.0				2.6				1.3				9.9				3.75				.250				4.00				.313				2.80			
9X 5X				250/				313T				195.0				2.4				1.2				9.0				3.81				.250				5.00				.313				2.55			
8X 5X				250/				375T				172.8				2.3				1.2				8.1				3.88				.250				5.00				.375				2.31			
10X 4X				250/				375T				239.9				2.7				1.3				9.9				4.00				.250				4.00				.375				2.81			
10X 5X				250/				313T				244.3				2.7				1.3				9.8				4.06				.250				5.00				.313				2.80			
9X 5X				250/				375T				220.2				2.6				1.3				8.9				4.13				.250				5.00				.375				2.56			
8X 5X				250/				438T				192.5				2.4				1.3				8.0				4.19				.250				5.00				.438				2.33			
10X 4X				250/				438T				264.2				2.8				1.4				9.9				4.25				.250				4.00				.438				2.83			
14X 5X				250/				375T				180.1				2.6				1.4				9.8				4.38				.250				5.00				.375				2.81			
14X 8X				250/				375T				190.9				2.9				1.4				9.8				4.38				.250				5.00				.375				2.81			
15X 10X				250/				438T				274.8				2.7				1.4				8.9				4.44				.250				5.00				.438				2.58			
15X 10X				250/				375T				275.5				2.7				1.4				8.9				4.44				.250				5.00				.375				2.58			
15X 30				250/				375T				175.7				2.7				1.4				8.8				4.50				.250				6.00				.375				2.58			
15X 30				250/				375T				248.2				2.7				1.4				8.8				4.50				.250				6.00				.375				2.58			



0.875 IN. PLATE (AREA= 29.09 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		R	VP	VF	***** BEAM DIMENSIONS *****		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA				DEPTH	WEB THICK	
8X 6X .250/.438T	15.74	159.3	27.6	2.5	1.4	7.9	AREA	FLANGE WIDTH	THICK
10X 5X .250/.438T	15.95	199.3	31.2	3.0	1.5	9.8	4.63	6.00	.438
10X 6X .250/.375T	16.15	200.0	31.9	3.0	1.5	9.7	4.75	6.00	.375
9X 7X .250/.375T	16.53	183.0	31.6	2.9	1.5	8.7	4.88	7.00	.375
8X 7X .250/.438T	17.20	166.0	31.2	2.7	1.5	7.8	5.06	7.00	.438
10X 7X .250/.375T	17.44	207.8	35.7	3.2	1.7	9.6	5.13	7.00	.375
9X 7X .250/.438T	18.05	191.0	35.6	3.0	1.6	8.7	5.31	7.00	.438
10X 4X .313/.563T	18.29	202.3	33.7	3.1	1.6	9.8	5.38	4.00	.563
12X 4X .313/.406T	18.29	233.2	35.0	3.4	1.7	11.5	5.38	4.00	.406
8X 8X .250/.438T	18.70	171.8	34.8	2.8	1.6	7.7	5.50	8.44	.438
10X 7X .250/.438T	18.90	216.0	40.1	3.3	1.8	9.5	5.56	10.44	.438
12X 4X .313/.469T	19.14	240.7	38.0	3.6	1.8	11.5	5.63	12.47	.469
9X 8X .250/.438T	19.55	197.1	39.6	3.1	1.7	8.6	5.75	9.44	.438
12X 5X .313/.406T	19.65	244.2	39.9	3.6	1.9	11.4	5.78	12.41	.406
12X 4X .313/.531T	19.99	247.7	40.9	3.7	1.9	11.5	5.88	10.44	.531
10X 8X .250/.438T	20.40	222.6	44.5	3.5	1.9	9.4	6.00	10.44	.438
12X 5X .313/.469T	20.71	252.3	43.6	3.8	2.0	11.4	6.09	12.47	.469
12X 6X .313/.406T	21.05	253.6	44.8	3.8	2.0	11.3	6.19	12.41	.406
12X 5X .313/.531T	21.79	259.5	47.4	3.9	2.1	11.3	6.41	12.53	.531
12X 6X .313/.469T	22.30	261.9	49.3	3.9	2.1	11.2	6.56	12.47	.469
12X 7X .313/.406T	22.41	262.0	49.8	3.9	2.1	11.2	6.59	12.41	.406
12X 6X .313/.531T	23.60	269.3	53.8	4.1	2.2	11.2	6.94	12.53	.531
12X 7X .313/.469T	23.90	270.2	55.0	4.1	2.3	11.1	7.03	12.47	.469
14X 4X .375/.469T	24.24	289.7	50.4	4.3	2.3	13.1	7.13	14.47	.469
14X 4X .375/.531T	25.09	296.8	53.8	4.4	2.4	13.0	7.38	14.53	.531
12X 7X .313/.531T	25.40	277.5	60.2	4.3	2.4	11.0	7.47	12.53	.531
12X 8X .313/.469T	25.50	277.3	60.7	4.3	2.4	10.9	7.50	12.47	.469
14X 4X .375/.594T	25.94	303.3	57.2	4.5	2.5	13.0	7.63	14.59	.594
14X 5X .375/.656T	26.45	271.8	57.4	4.2	2.4	11.2	7.78	12.66	.656
14X 5X .375/.531T	26.89	309.0	61.3	4.6	2.5	12.9	7.91	14.53	.531
14X 6X .375/.531T	27.20	284.5	66.6	4.4	2.5	10.9	8.00	12.53	.531
14X 5X .375/.656T	28.70	319.4	68.7	4.8	2.7	12.7	8.44	14.53	.656
14X 7X .375/.469T	29.00	322.2	69.7	4.9	2.8	12.8	8.53	14.66	.469
12X 9X .313/.531T	29.00	320.5	73.0	4.8	2.8	12.6	8.53	12.53	.531
14X 6X .375/.594T	29.35	326.2	73.8	5.0	2.9	12.6	8.81	14.59	.594
14X 7X .375/.531T	30.50	328.0	76.0	5.0	2.9	12.5	9.00	14.53	.531
14X 8X .375/.469T	30.60	327.8	76.6	5.0	2.9	12.4	9.00	14.47	.469
12X 10X .313/.531T	30.80	295.7	79.4	4.7	2.8	10.6	9.06	12.53	.531
14X 6X .375/.656T	31.25	332.6	78.8	5.1	3.0	12.6	9.19	14.66	.656
14X 7X .375/.594T	31.33	334.9	82.0	5.1	3.0	12.4	9.41	14.59	.594
14X 8X .375/.531T	32.30	335.6	83.5	5.2	3.1	12.3	9.50	14.53	.531
16X 5X .438/.531T	32.84	358.7	77.9	5.4	3.1	14.3	9.66	16.53	.531
16X 5X .438/.594T	33.90	365.7	82.7	5.5	3.2	14.2	9.97	16.59	.594

0.8750 - 7/8 in.

0.875 IN. PLATE (AREA= 29.09 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	YF	AREA	DEPTH	THICK	BEAM DIMENSIONS			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	INERTIA							WE3	WIDTH	FLANGE THICK	
14X 8X .375/.594T	34.00	342.7	20.4	1106.0	5.3	3.2	12.2	10.00	14.59	.375	6.00	8.00	.594	5.80
14X 9X .375/.531T	34.10	342.2	30.8	1105.6	5.3	3.2	12.2	10.03	14.53	.375	9.00	5.00	.531	5.78
16X 6X .438/.531T	34.55	369.5	95.4	1219.7	5.6	3.3	14.2	10.28	16.53	.438	6.00	5.00	.531	7.62
16X 5X .438/.656T	34.35	372.3	97.4	1241.7	5.6	3.3	14.2	10.28	16.66	.438	6.00	5.00	.656	7.60
12X10X .375/.594T	35.50	301.2	89.4	928.6	4.8	3.1	10.4	10.44	12.59	.375	10.00	5.00	.594	5.05
14X 8X .375/.656T	35.70	348.8	97.0	1179.0	5.5	3.4	12.2	10.56	14.66	.375	8.00	5.00	.656	5.83
16X 6X .438/.594T	35.30	376.7	92.1	1292.3	5.7	3.4	14.0	10.56	16.59	.438	6.00	5.00	.594	7.65
14X10X .375/.531T	35.90	348.0	98.2	1179.6	5.5	3.4	12.0	10.56	14.53	.375	10.00	5.00	.531	5.78
16X 5X .438/.719T	36.01	378.5	98.2	1304.7	5.7	3.4	14.1	10.59	16.72	.438	5.00	5.00	.719	7.71
14X 9X .375/.594T	36.01	349.1	98.5	1188.4	5.5	3.4	12.1	10.59	14.59	.375	9.00	5.00	.594	5.80
16X 6X .438/.656T	37.20	383.4	97.8	1366.2	5.8	3.6	14.0	10.34	16.66	.438	6.00	5.00	.656	7.68
18X 6X .438/.531T	37.60	419.9	101.3	1584.1	6.3	3.8	15.6	11.06	18.53	.438	6.00	5.00	.531	8.50
18X 5X .438/.656T	37.04	422.8	102.6	1612.3	6.3	3.8	15.7	11.16	18.66	.438	5.00	5.00	.656	8.56
14X10X .375/.594T	38.05	354.8	105.8	1269.5	5.6	3.6	11.9	11.19	14.59	.375	10.00	5.00	.594	5.80
16X 6X .438/.719T	38.45	389.7	103.5	1438.9	6.0	3.7	13.9	11.31	16.72	.438	6.00	5.00	.719	7.71
18X 6X .438/.594T	38.90	427.7	107.8	1676.4	6.4	3.9	15.5	11.44	18.59	.438	6.00	5.00	.594	8.53
18X 5X .438/.719T	39.00	429.3	107.9	1689.2	6.5	3.9	15.7	11.47	18.72	.438	5.00	5.00	.719	8.58
16X 8X .438/.594T	39.35	394.2	110.7	1509.1	6.1	3.8	13.6	11.75	16.59	.438	8.00	5.00	.594	7.65
16X 9X .438/.531T	40.05	393.9	111.3	1510.4	6.1	3.8	13.6	11.78	16.53	.438	9.00	5.00	.531	7.62
14X11X .375/.594T	40.05	360.0	115.2	1349.3	5.7	3.7	11.7	11.78	14.59	.375	11.00	5.00	.594	5.80
18X 7X .438/.594T	40.90	437.8	118.2	1811.1	6.6	4.1	15.3	12.03	18.59	.438	7.00	5.00	.594	8.53
18X 8X .438/.531T	41.24	438.7	120.1	1829.6	6.7	4.2	15.2	12.13	18.53	.438	8.00	5.00	.531	8.50
18X 6X .438/.719T	41.45	441.4	120.5	1854.7	6.7	4.2	15.4	12.13	18.72	.438	6.00	5.00	.719	8.58
16X10X .438/.531T	41.85	400.5	119.8	1604.8	6.2	4.0	13.4	12.31	16.53	.438	10.00	5.00	.531	7.62
16X 9X .438/.594T	41.96	401.4	120.0	1613.4	6.2	4.0	13.4	12.34	16.59	.438	9.00	5.00	.594	7.65
18X 7X .438/.656T	42.40	443.1	125.1	1905.6	6.8	4.3	15.2	12.47	18.66	.438	7.00	5.00	.656	8.56
14X11X .375/.656T	42.40	365.7	124.3	1441.3	5.9	3.9	11.6	12.47	14.66	.375	11.00	5.00	.656	5.83
18X 9X .438/.531T	43.04	446.4	129.4	1946.6	6.8	4.4	15.0	12.66	18.53	.438	9.00	5.00	.531	8.50
16X10X .438/.594T	44.00	407.8	129.4	1716.0	6.4	4.2	13.3	12.94	16.59	.438	10.00	5.00	.594	7.65
18X 8X .438/.656T	44.64	454.0	137.1	2057.4	7.0	4.5	15.0	13.13	18.66	.438	8.00	5.00	.656	8.56
16X11X .438/.594T	46.00	413.3	138.6	1812.6	6.5	4.4	13.1	13.53	16.59	.438	11.00	5.00	.594	7.65
16X10X .438/.656T	46.10	414.5	138.9	1824.0	6.5	4.4	13.1	13.56	16.66	.438	10.00	5.00	.656	7.68
18X 9X .438/.656T	46.85	461.9	148.6	2196.8	7.2	4.8	14.8	13.78	18.66	.438	9.00	5.00	.656	8.56
16X10X .438/.594T	46.95	461.5	149.5	2198.2	7.2	4.8	14.7	13.91	18.59	.438	10.00	5.00	.594	8.53
18X10X .438/.719T	49.25	420.6	148.6	1932.3	6.7	4.6	13.0	14.19	16.72	.438	10.00	5.00	.719	7.71
16X11X .438/.656T	48.35	420.0	149.2	1930.6	6.7	4.6	12.9	14.22	16.66	.438	11.00	5.00	.656	7.68
18X10X .438/.656T	49.10	468.7	160.1	2331.5	7.3	5.0	14.6	14.44	18.66	.438	10.00	5.00	.656	8.56
16X11X .438/.719T	50.69	425.9	159.7	2043.2	6.8	4.8	12.8	14.91	16.72	.438	11.00	5.00	.719	7.71
21X 8X .500/.625T	51.31	474.8	171.5	2461.6	7.5	5.2	14.4	15.09	18.66	.500	8.00	5.00	.625	11.25
18X11X .438/.656T	52.70	529.8	165.4	2888.8	8.0	5.5	17.1	15.50	21.63	.438	11.00	5.00	.656	8.56
21X 8X .500/.656T	53.55	480.3	183.0	2588.1	7.6	5.4	14.1	15.75	18.66	.438	12.00	5.00	.656	8.56
18X12X .438/.656T	54.40	537.6	173.2	3033.2	8.2	5.6	16.8	16.50	21.69	.500	8.00	5.00	.656	8.56
21X 8X .500/.750T	56.10	544.7	188.9	3173.1	8.3	5.8	16.9	16.50	21.75	.500	8.00	5.00	.750	11.31
21X10X .500/.625T	56.95	546.4	194.4	3227.4	8.4	5.9	16.6	16.75	21.63	.500	10.00	5.00	.625	11.25
21X 9X .500/.750T	58.65	553.8	204.2	3375.1	8.5	6.1	16.5	17.25	21.75	.500	9.00	5.00	.750	11.31

0.8750 - 7/8 in.



.875 IN. PLATE (AREA= 29.09 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	THICK	
21X11X .500/.625T	59.09	553.7	207.2	3393.2	8.5	6.1	16.4	17.38	21.63	.500	11.00	.625	11.25
21X 8X .500/.875T	59.50	558.0	208.5	3454.5	8.6	6.2	16.6	17.50	21.88	.500	8.00	.875	11.30
21X10X .500/.750T	61.20	561.6	219.1	3565.9	8.7	6.3	16.3	18.00	21.75	.500	10.00	.750	11.31
21X11X .500/.688T	61.40	561.5	220.6	3574.3	8.7	6.4	16.2	18.06	21.69	.500	11.00	.688	11.28
21X13X .500/.688T	66.10	573.9	248.4	3912.0	9.0	6.8	15.7	19.44	21.69	.500	13.00	.688	11.28
21X12X .500/.750T	66.30	575.1	249.3	3934.2	9.0	6.8	15.8	19.50	21.75	.500	12.00	.750	11.31
21X11X .500/.875T	68.44	581.5	261.0	4099.0	9.1	7.0	15.7	20.13	21.88	.500	11.00	.875	11.30
24X 9X .625/.750T	73.95	639.5	259.7	4732.6	9.6	7.4	18.2	21.75	24.75	.625	9.00	.750	16.02
24X10X .625/.750T	76.50	648.7	276.7	4970.5	9.8	7.7	18.0	22.50	24.75	.625	10.00	.750	16.02
24X11X .625/.750T	79.05	656.8	293.4	5196.6	10.0	7.9	17.7	23.25	24.75	.625	11.00	.750	16.02
24X10X .625/.875T	80.75	663.4	303.6	5364.0	10.1	8.1	17.7	23.75	24.88	.625	10.00	.875	16.10
24X 9X .625/1.125T	85.44	679.2	332.5	5805.0	10.3	8.5	17.5	25.13	25.13	.625	9.00	1.125	16.25
24X13X .625/.875T	89.69	686.0	362.3	6105.7	10.5	8.9	16.9	26.38	24.88	.625	13.00	.875	16.10
24X14X .625/.875T	92.65	692.3	381.9	6338.7	10.6	9.2	16.6	27.25	24.88	.625	14.00	.875	16.10
24X11X .625/1.125T	93.09	696.6	382.7	6423.3	10.7	9.2	16.8	27.38	25.13	.625	11.00	1.125	16.25
24X12X .625/1.125T	96.90	703.9	407.6	6712.3	10.8	9.5	16.5	28.50	25.13	.625	12.00	1.125	16.25
27X 9X .688/1.125T	97.55	772.4	395.4	7504.8	11.5	9.8	19.2	28.69	28.13	.688	9.00	1.125	19.96
24X16X .625/.875T	98.60	703.2	420.8	6780.1	10.8	9.6	16.1	29.00	24.88	.625	16.00	.875	16.10
27X12X .688/.875T	98.80	773.0	407.2	7668.5	11.5	9.9	18.8	29.06	27.88	.688	12.00	.875	19.78
27X13X .688/.875T	101.80	780.9	428.9	7961.1	11.6	10.2	18.6	29.94	27.88	.688	13.00	.875	19.78
27X11X .688/1.125T	105.20	792.6	451.2	8340.3	11.8	10.5	18.5	30.94	28.13	.688	11.00	1.125	19.96
30X13X .750/.875T	115.19	879.8	501.6	10144.2	12.7	11.5	20.2	33.88	30.88	.750	13.00	.875	23.82
27X14X .688/1.125T	116.65	816.1	533.8	9360.0	12.2	11.5	17.5	34.31	28.13	.688	14.00	1.125	19.96
30X11X .750/1.125T	118.59	892.7	525.9	10591.4	12.9	11.9	20.1	34.88	31.13	.750	11.00	1.125	24.00
27X15X .688/1.125T	120.50	822.7	561.9	9684.2	12.3	11.8	17.2	35.44	28.13	.688	15.00	1.125	19.96
30X12X .750/1.125T	122.40	902.8	556.5	11018.8	13.0	12.2	19.8	36.00	31.13	.750	12.00	1.125	24.00
30X16X .750/.875T	124.10	903.4	572.8	11131.6	13.0	12.3	19.4	36.50	30.88	.750	16.00	.875	23.82
27X16X .688/1.125T	124.30	828.6	589.1	9986.6	12.3	12.1	17.0	36.56	28.13	.688	16.00	1.125	19.96
30X14X .750/1.125T	130.05	920.3	617.1	11822.3	13.2	12.8	19.2	38.25	31.13	.750	14.00	1.125	24.00
30X10X .875/1.375T	136.00	920.3	592.0	11499.7	12.9	12.5	19.0	40.00	31.38	.875	10.00	1.375	28.22
33X12X .875/1.125T	144.09	1017.1	654.5	13940.3	14.0	13.7	21.3	42.38	34.13	.875	12.00	1.125	30.63
33X10X .875/1.375T	144.94	1022.9	657.7	14112.8	14.0	13.8	21.5	42.63	34.38	.875	10.00	1.375	30.85
36X10X .875/1.125T	145.35	1095.1	661.6	15674.0	14.8	14.3	23.7	42.75	37.13	.875	10.00	1.125	33.25
33X11X .875/1.375T	149.60	1035.8	697.8	14699.0	14.2	14.2	21.1	44.00	34.38	.875	11.00	1.375	30.85
33X14X .875/1.125T	151.74	1037.5	719.6	14873.4	14.2	14.3	20.7	44.63	34.13	.875	14.00	1.125	30.63
36X10X .875/1.500T	158.10	1142.6	774.2	17110.3	15.3	15.5	22.9	46.50	37.50	.875	10.00	1.500	33.58
36X14X .875/1.375T	172.55	1178.1	909.1	19630.1	15.7	16.7	21.6	50.75	37.38	.875	14.00	1.375	33.47
36X15X .875/1.500T	183.60	1203.1	1008.0	21048.1	15.9	17.5	20.9	54.00	37.50	.875	15.00	1.500	33.58

0.8750 - 7/8 in.

1.000 IN. PLATE (AREA= 30.00 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA	R	Y <sub>P</sub>	V <sub>F</sub>	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
3X 2X	.125/ .188T	WT/FT	ZPL							THICK	WEB	FLANGE	
3X 2X	.125/ .188T	2.55	17.6	2.7	9.7	.5	.6	.75	3.19	.125	.188	.188	.52
4X 2X	.125/ .188T	2.99	25.5	3.2	14.7	.6	.6	.88	4.19	.125	.188	.188	.65
5X 2X	.125/ .188T	3.20	21.2	3.3	12.1	.6	.6	.94	3.19	.125	.188	.188	.52
5X 2X	.125/ .188T	3.40	35.6	3.8	21.4	.7	.6	1.00	5.19	.125	.188	.188	.77
4X 3X	.125/ .188T	3.60	30.8	4.0	18.4	.7	.6	1.06	4.19	.125	.188	.188	.65
5X 3X	.125/ .188T	4.05	43.1	4.9	27.1	.8	.6	1.19	5.19	.125	.188	.188	.77
4X 2X	.188/ .313T	4.69	35.2	4.7	21.9	.7	.6	1.38	4.31	.188	.188	.313	1.00
3X 3X	.188/ .313T	5.10	29.1	4.8	17.9	.7	.6	1.50	3.31	.188	.188	.313	.81
5X 2X	.188/ .313T	5.30	49.2	5.7	32.5	.9	.7	1.56	5.31	.188	.188	.313	1.19
6X 2X	.188/ .313T	5.95	66.0	7.0	46.4	1.1	.7	1.75	6.31	.188	.188	.313	1.37
7X 2X	.188/ .250T	6.15	77.6	7.5	56.5	1.2	.7	1.81	7.25	.188	.188	.250	1.55
5X 3X	.188/ .313T	6.39	59.7	7.5	42.1	1.0	.7	1.88	5.31	.188	.188	.313	1.19
5X 4X	.188/ .250T	6.60	61.0	7.8	43.4	1.0	.7	1.94	5.25	.188	.188	.250	1.18
7X 3X	.188/ .250T	7.00	90.6	9.4	70.1	1.3	.8	2.06	7.25	.188	.188	.250	1.55
6X 4X	.188/ .250T	7.24	80.5	9.5	61.6	1.2	.8	2.13	6.25	.188	.188	.250	1.36
5X 4X	.188/ .313T	7.45	68.6	9.2	51.2	1.1	.7	2.19	5.31	.188	.188	.313	1.19
7X 3X	.188/ .250T	7.65	99.7	10.7	80.6	1.4	.8	2.25	7.31	.188	.188	.250	1.55
6X 4X	.188/ .313T	7.85	102.0	11.2	83.5	1.4	.8	2.31	7.25	.188	.188	.313	1.37
8X 4X	.188/ .313T	8.09	89.7	11.1	72.1	1.3	.8	2.38	6.31	.188	.188	.313	1.37
7X 4X	.188/ .313T	8.70	112.4	13.1	97.2	1.5	.9	2.56	7.31	.188	.188	.313	1.56
6X 5X	.188/ .313T	9.15	99.3	13.1	84.7	1.4	.9	2.69	6.31	.188	.188	.313	1.37
6X 3X	.250/ .438T	9.55	95.2	12.2	80.4	1.4	.8	2.81	6.44	.250	.438	.313	1.86
7X 5X	.188/ .313T	9.79	123.8	15.4	114.1	1.7	.9	2.88	7.31	.188	.188	.313	1.56
6X 4X	.250/ .375T	10.20	100.1	13.4	87.3	1.5	.9	3.00	6.38	.250	.375	.375	1.85
7X 3X	.250/ .375T	10.40	119.1	14.5	103.2	1.6	.9	3.06	7.44	.250	.375	.375	2.35
8X 3X	.250/ .375T	10.64	136.7	15.5	130.9	1.8	1.0	3.13	8.38	.250	.375	.375	2.56
9X 3X	.250/ .313T	10.85	153.1	16.3	152.1	1.9	1.0	3.19	9.31	.250	.375	.375	2.33
8X 4X	.250/ .313T	11.05	141.3	16.6	138.6	1.8	1.0	3.25	8.31	.250	.375	.375	2.33
10X 3X	.250/ .375T	11.25	144.7	17.0	143.9	1.9	1.0	3.31	8.44	.250	.375	.375	2.36
9X 3X	.250/ .375T	11.49	162.6	18.0	168.4	2.0	1.0	3.38	9.38	.250	.375	.375	2.60
10X 3X	.250/ .313T	11.70	179.6	18.8	192.8	2.2	1.1	3.44	10.31	.250	.375	.375	2.83
8X 4X	.250/ .375T	11.90	151.1	18.6	155.7	1.9	1.0	3.50	8.38	.250	.375	.375	2.35
9X 3X	.250/ .438T	12.10	171.5	19.7	184.7	2.1	1.1	3.56	9.44	.250	.438	.375	2.61
10X 3X	.250/ .375T	12.34	189.6	20.7	212.4	2.3	1.1	3.63	10.38	.250	.375	.375	2.85
10X 4X	.250/ .313T	12.75	195.1	22.1	228.1	2.3	1.1	3.75	10.31	.250	.375	.375	2.83
9X 5X	.250/ .313T	12.95	180.3	22.2	203.7	2.2	1.1	3.81	9.31	.250	.375	.375	2.58
8X 5X	.250/ .375T	13.19	163.8	21.9	181.0	2.1	1.1	3.88	8.38	.250	.375	.375	2.35
10X 4X	.250/ .375T	13.60	206.8	24.6	250.1	2.4	1.2	4.00	10.38	.250	.375	.375	2.85
10X 5X	.250/ .313T	13.80	208.5	25.3	254.8	2.5	1.2	4.06	10.31	.250	.375	.375	2.83
9X 5X	.250/ .375T	14.04	192.0	25.1	230.2	2.3	1.2	4.13	9.38	.250	.375	.375	2.60
8X 5X	.250/ .438T	14.25	173.2	24.4	201.9	2.2	1.2	4.19	8.44	.250	.438	.375	2.36
10X 4X	.250/ .438T	14.45	217.2	27.1	275.8	2.6	1.3	4.25	10.44	.250	.438	.375	2.86
10X 5X	.250/ .375T	14.89	221.1	28.5	286.9	2.6	1.3	4.38	10.38	.250	.375	.375	2.85
9X 5X	.250/ .438T	15.10	202.6	28.0	256.7	2.5	1.3	4.44	9.44	.250	.438	.375	2.61
9X 6X	.250/ .375T	15.30	203.4	28.5	259.8	2.5	1.3	4.50	9.38	.250	.375	.375	2.60

1.0000 - 1 in.



1.000 IN. PLATE (AREA= 38.00 SQ.IN.)

***** BEAM DIMENSIONS *****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														

1.0000 - 1 in.

1.000 IN. PLATE (AREA= 38.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL							WEB THICK	FLANGE WIDTH	FLANGE THICK	
14X 8X .375/.594T	34.00	421.7	91.7	1174.6	4.9	2.8	12.8	10.00	14.59	.375	8.00	.594	5.85
14X 9X .375/.531T	34.10	421.1	32.2	1174.4	4.9	2.8	12.7	10.03	14.53	.375	9.00	.531	5.82
16X 6X .438/.531T	34.65	453.6	87.9	1290.5	5.2	2.8	14.7	10.19	16.53	.438	6.00	.531	7.68
16X 5X .438/.656T	34.95	457.3	89.0	1315.3	5.2	2.9	14.8	10.28	16.66	.438	5.00	.656	7.74
12X10X .375/.594T	35.50	370.8	90.8	991.0	4.5	2.7	10.9	10.44	12.59	.375	10.00	.594	5.10
14X 8X .375/.656T	35.70	430.3	98.5	1254.7	5.1	2.9	12.7	10.50	14.66	.375	8.00	.656	5.87
16X 6X .438/.594T	35.90	463.4	93.6	1370.3	5.3	3.0	14.6	10.56	16.59	.438	6.00	.594	7.70
14X10X .375/.531T	35.90	429.4	33.6	1255.8	5.1	2.9	12.6	10.56	14.53	.375	10.00	.531	5.82
16X 5X .438/.719T	36.01	465.6	33.8	1383.6	5.3	3.0	14.7	10.59	16.72	.438	5.00	.719	7.76
14X 9X .375/.594T	36.01	430.8	100.0	1265.2	5.1	2.9	12.7	10.59	14.59	.375	9.00	.594	5.85
16X 6X .438/.656T	37.20	472.5	99.4	1450.9	5.4	3.1	14.6	10.34	16.66	.438	6.00	.656	7.74
18X 6X .438/.531T	37.60	517.8	103.1	1679.5	5.9	3.2	16.3	11.06	18.53	.438	6.00	.531	8.55
18X 5X .438/.656T	37.94	521.5	104.4	1709.9	5.9	3.3	16.4	11.16	18.66	.438	5.00	.656	8.61
14X10X .375/.594T	38.05	439.0	108.4	1355.0	5.2	3.1	12.5	11.19	14.59	.375	10.00	.594	5.85
16X 6X .438/.719T	38.45	481.0	105.3	1530.2	5.6	3.2	14.5	11.31	16.72	.438	6.00	.719	7.76
18X 6X .438/.594T	38.90	528.3	109.7	1779.9	6.0	3.4	16.2	11.44	18.59	.438	6.00	.594	8.58
18X 5X .438/.719T	39.00	530.3	109.8	1793.4	6.0	3.4	16.3	11.47	18.72	.438	5.00	.719	8.64
16X 8X .438/.594T	39.95	487.4	112.5	1607.7	5.7	3.3	14.3	11.75	16.59	.438	8.00	.594	7.70
16X 9X .438/.531T	40.05	487.1	113.1	1609.4	5.7	3.3	14.2	11.78	16.53	.438	9.00	.531	7.68
14X11X .375/.594T	40.05	446.5	116.8	1443.7	5.4	3.2	12.4	11.78	14.59	.375	11.00	.594	5.85
18X 7X .438/.594T	40.90	541.9	120.2	1927.1	6.2	3.6	16.0	12.03	18.59	.438	7.00	.594	8.58
18X 6X .438/.531T	41.24	543.2	122.1	1947.6	6.2	3.6	15.9	12.13	18.53	.438	8.00	.531	8.55
18X 6X .438/.719T	41.45	546.8	122.6	1974.6	6.3	3.6	16.1	12.19	18.72	.438	6.00	.719	8.64
16X10X .438/.531T	41.85	496.2	121.7	1713.5	5.8	3.5	14.1	12.31	16.53	.438	10.00	.531	7.68
16X 9X .438/.594T	41.96	497.4	122.0	1722.8	5.9	3.5	14.1	12.34	16.59	.438	9.00	.594	8.61
18X 7X .438/.656T	42.40	549.5	127.3	2031.6	6.3	3.7	16.0	12.47	18.66	.438	7.00	.656	8.61
14X11X .375/.656T	42.40	454.7	126.1	1546.4	5.5	3.4	12.3	12.47	14.66	.375	11.00	.656	5.87
18X 9X .438/.531T	43.04	553.9	131.6	2076.2	6.4	3.7	15.8	12.66	18.53	.438	9.00	.531	8.55
16X10X .438/.594T	44.00	506.4	131.5	1836.6	6.0	3.6	14.0	12.94	16.59	.438	10.00	.594	7.70
18X 8X .438/.656T	44.64	564.0	139.4	2198.1	6.6	3.9	13.8	13.13	18.66	.438	8.00	.656	8.61
16X11X .438/.594T	46.00	514.1	140.8	1944.2	6.1	3.8	13.9	13.53	16.59	.438	11.00	.594	7.70
16X10X .438/.656T	46.10	515.6	141.1	1956.7	6.2	3.8	13.9	13.56	16.66	.438	10.00	.656	7.74
18X 9X .438/.719T	46.85	574.9	151.1	2352.7	6.7	4.1	15.6	13.78	18.66	.438	9.00	.719	8.61
18X10X .438/.594T	46.95	574.5	152.0	2354.6	6.7	4.1	15.5	13.81	18.59	.438	10.00	.594	8.58
16X10X .438/.719T	48.25	524.1	151.0	2077.6	6.3	4.0	13.8	14.19	16.72	.438	10.00	.719	7.76
16X11X .438/.656T	48.35	523.4	151.6	2076.2	6.3	4.0	13.7	14.22	16.66	.438	11.00	.656	7.74
18X10X .438/.656T	49.10	584.3	162.8	2502.9	6.9	4.3	15.4	14.44	18.66	.438	10.00	.656	8.61
16X11X .438/.719T	50.69	531.5	162.2	2202.5	6.5	4.1	13.6	14.91	16.72	.438	11.00	.719	7.76
18X11X .438/.656T	51.31	592.8	174.3	2648.7	7.1	4.5	15.2	15.09	18.66	.438	11.00	.656	8.61
21X 8X .500/.625T	52.70	659.1	172.7	3096.7	7.6	4.7	17.9	15.50	21.63	.500	8.00	.625	11.32
18X12X .438/.656T	53.55	608.4	186.0	2791.3	7.2	4.6	15.0	15.75	18.66	.438	12.00	.656	8.61
21X 8X .500/.688T	54.40	669.5	182.7	3256.6	7.8	4.9	17.8	16.00	21.69	.500	8.00	.688	11.35
21X 8X .500/.750T	56.10	678.9	192.5	3412.2	7.9	5.0	17.7	16.50	21.75	.500	8.00	.750	11.38
21X10X .500/.625T	56.95	681.3	198.1	3473.5	8.0	5.1	17.5	16.75	21.63	.500	18.00	.625	11.32
21X 9X .500/.750T	58.65	691.1	208.1	3638.1	8.1	5.3	17.5	17.25	21.75	.500	9.00	.750	11.38

1.0000 - 1 in.



1.000 IN. PLATE (AREA= 39.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	THICK	
21X11X .500/.625T	59.09	691.0	211.1	3659.3	8.1	5.3	17.3	17.38	21.63	.500	11.00	.625	11.32
21X 8X .500/.875T	59.50	696.6	212.6	3728.2	8.2	5.3	17.5	17.50	21.88	.500	8.00	.875	11.44
21X10X .500/.750T	61.20	701.5	223.2	3852.6	8.3	5.5	17.3	18.00	21.75	.500	10.00	.750	11.38
21X11X .500/.688T	61.40	701.5	224.8	3862.6	8.3	5.5	17.2	18.06	21.69	.500	11.00	.688	11.35
21X13X .500/.688T	66.10	718.1	253.0	4245.3	8.6	5.9	16.8	19.44	21.69	.500	13.00	.688	11.35
21X12X .500/.750T	66.30	719.7	253.9	4269.9	8.6	5.9	16.8	19.50	21.75	.500	12.00	.750	11.38
21X11X .500/.875T	68.44	728.2	265.9	4456.7	8.8	6.1	16.8	20.13	21.88	.500	11.00	.875	11.44
24X 9X .625/.750T	73.95	795.5	265.8	5129.6	9.3	6.4	19.3	21.75	24.75	.625	9.00	.750	16.09
24X10X .625/.750T	76.50	807.5	283.1	5397.6	9.4	6.7	19.1	22.50	24.75	.625	10.00	.750	16.09
24X11X .625/.750T	79.05	818.0	300.1	5653.6	9.6	6.9	18.8	23.25	24.88	.625	11.00	.750	16.09
24X10X .625/.875T	80.75	826.4	310.6	5842.3	9.7	7.1	18.8	23.75	24.88	.625	10.00	.875	16.18
24X 9X .625/1.125T	85.44	846.8	340.3	6342.5	10.0	7.5	18.6	25.13	25.13	.625	9.00	1.125	16.33
24X13X .625/.875T	89.69	855.9	370.5	6691.4	10.2	7.8	18.1	26.38	24.88	.625	13.00	.875	16.18
24X14X .625/.875T	92.65	864.1	390.5	6960.4	10.3	8.1	17.8	27.25	24.88	.625	14.00	.875	16.18
24X11X .625/1.125T	93.09	869.5	331.5	7054.3	10.4	8.1	18.0	27.38	25.13	.625	11.00	1.125	16.33
24X12X .625/1.125T	96.90	879.0	417.0	7389.7	10.5	8.4	17.7	28.50	25.13	.625	12.00	1.125	16.33
27X 9X .688/1.125T	97.55	959.3	405.6	8306.1	11.2	8.7	20.5	28.69	28.13	.688	9.00	1.125	20.04
24X16X .625/.875T	99.60	878.5	430.2	7473.5	10.6	8.5	17.4	29.00	24.88	.688	16.00	.875	16.18
27X12X .688/.875T	98.80	960.4	417.5	8403.9	11.2	8.8	20.1	29.06	27.88	.688	12.00	.875	19.87
27X13X .688/.875T	101.80	970.5	439.7	8739.4	11.3	9.0	19.9	29.94	27.88	.688	13.00	.875	19.87
27X11X .688/1.125T	105.20	985.2	462.8	9172.1	11.5	9.3	19.8	30.94	28.13	.688	11.00	1.125	20.04
30X13X .750/.875T	115.19	1088.3	515.5	11151.8	12.5	10.2	21.6	33.88	30.88	.750	13.00	.875	23.91
27X14X .688/1.125T	116.65	1015.2	547.3	10357.8	12.0	10.2	18.9	34.31	28.13	.688	14.00	1.125	20.04
30X11X .750/1.125T	118.59	1104.3	540.6	11661.1	12.6	10.6	21.6	34.88	31.13	.750	11.00	1.125	24.10
27X15X .688/1.125T	120.50	1023.7	576.1	10738.2	12.1	10.5	18.6	35.44	28.13	.688	15.00	1.125	20.04
30X12X .750/1.125T	122.40	1117.0	572.0	12154.2	12.8	10.9	21.2	36.00	31.13	.750	12.00	1.125	24.10
30X16X .750/.875T	124.10	1117.9	588.5	12290.3	12.8	11.0	20.9	36.50	30.88	.750	16.00	.875	23.91
27X16X .688/1.125T	124.30	1031.3	603.9	11094.6	12.2	10.8	18.4	36.56	28.13	.688	16.00	1.125	20.04
30X14X .750/1.125T	130.05	1138.9	634.1	13087.0	13.1	11.5	20.6	38.25	31.13	.750	14.00	1.125	24.10
30X10X .875/1.375T	136.00	1132.5	599.9	12698.8	12.8	11.2	21.2	40.00	31.38	.875	10.00	1.375	28.33
33X12X .875/1.125T	144.09	1248.2	675.1	15392.0	13.8	12.3	22.8	42.38	34.13	.875	12.00	1.125	30.74
33X10X .875/1.375T	144.94	1255.1	678.7	15594.6	13.9	12.4	23.0	42.63	34.38	.875	10.00	1.375	30.96
36X10X .875/1.125T	145.35	1340.3	683.5	17259.5	14.6	12.9	25.3	42.75	37.13	.875	10.00	1.125	33.36
33X11X .875/1.375T	149.60	1271.0	719.9	16260.4	14.1	12.8	22.6	44.00	34.38	.875	11.00	1.375	30.96
33X14X .875/1.125T	151.74	1273.3	741.9	16468.5	14.1	12.9	22.2	44.63	34.13	.875	14.00	1.125	30.74
36X10X .875/1.500T	158.10	1397.8	799.6	19583.5	15.2	14.0	24.5	46.50	37.50	.875	10.00	1.500	33.69
36X14X .875/1.375T	172.55	1441.2	938.2	21810.3	15.7	15.1	23.2	50.75	37.38	.875	14.00	1.375	33.58
36X15X .875/1.500T	183.60	1471.7	1040.2	23463.1	16.0	15.9	22.6	54.00	37.50	.875	15.00	1.500	33.69

1.0000 - 1 in.

1.125 IN. PLATE (AREA= 48.09 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YF	AREA	DEPTH	THICK	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA						WIDTH	THICK	
3X 2X .125/ .188T	2.55	19.7	3.2	11.9	.5	.6	.75	3.19	.125	2.00	.188	.54
4X 2X .125/ .188T	2.93	27.3	3.6	17.0	.6	.6	.88	4.19	.125	2.00	.188	.66
3X 3X .125/ .188T	3.20	23.2	3.9	14.4	.5	.6	.94	3.19	.125	3.00	.188	.54
5X 2X .125/ .188T	3.40	37.1	4.2	23.9	.7	.6	1.00	5.19	.125	2.00	.188	.79
4X 3X .125/ .188T	3.60	32.5	4.5	20.9	.7	.6	1.06	4.19	.125	3.00	.188	.66
5X 3X .125/ .188T	4.05	44.7	5.3	29.8	.8	.7	1.06	5.19	.125	3.00	.188	.79
4X 2X .188/ .313T	4.69	37.1	5.1	24.5	.7	.7	1.38	4.31	.188	2.00	.313	1.02
3X 3X .188/ .313T	5.10	31.2	5.4	20.5	.6	.7	1.56	3.31	.188	3.00	.313	.83
5X 2X .188/ .313T	5.30	51.1	6.2	35.4	.8	.7	1.56	5.31	.188	2.00	.313	1.21
6X 2X .188/ .313T	5.95	68.3	7.4	49.7	1.0	.7	1.75	6.31	.188	2.00	.313	1.40
7X 2X .188/ .313T	6.15	80.3	7.8	59.9	1.1	.7	1.81	7.25	.188	2.00	.250	1.57
5X 3X .188/ .313T	6.39	62.2	7.9	45.3	1.0	.7	1.88	5.31	.188	3.00	.313	1.21
5X 4X .188/ .313T	6.60	63.6	8.3	46.7	1.0	.7	1.94	5.25	.188	4.00	.250	1.20
7X 3X .188/ .313T	7.00	94.3	9.7	73.9	1.2	.8	2.06	7.25	.188	3.00	.250	1.57
6X 4X .188/ .313T	7.24	84.2	9.9	65.3	1.1	.8	2.13	6.25	.188	4.00	.250	1.39
5X 4X .188/ .313T	7.45	71.9	9.7	54.8	1.0	.8	2.19	5.31	.188	4.00	.313	1.21
7X 4X .188/ .313T	7.65	104.4	11.1	84.8	1.3	.8	2.25	7.31	.188	3.00	.313	1.59
6X 4X .188/ .313T	7.85	107.0	11.6	87.8	1.3	.8	2.31	7.25	.188	4.00	.250	1.57
7X 5X .188/ .313T	8.09	94.2	11.5	76.2	1.2	.8	2.36	6.31	.188	4.00	.313	1.40
6X 5X .188/ .313T	8.70	118.8	13.5	101.9	1.4	.9	2.56	7.31	.188	5.00	.313	1.59
6X 5X .188/ .313T	9.15	105.3	13.6	89.3	1.3	.8	2.69	6.31	.188	5.00	.313	1.40
6X 3X .250/ .438T	9.55	100.9	12.6	84.9	1.3	.8	2.81	6.44	.250	3.00	.438	1.89
7X 5X .188/ .313T	9.79	132.1	15.9	119.5	1.5	.9	2.88	7.31	.188	5.00	.313	1.59
6X 4X .250/ .438T	10.20	106.5	13.9	92.1	1.3	.9	3.06	6.38	.250	4.00	.375	1.88
10.40	127.1	14.9	114.5	114.5	1.5	.9	3.06	7.44	.250	3.00	.438	2.14
8X 3X .250/ .375T	10.64	146.5	16.0	136.7	1.6	.9	3.13	8.38	.250	3.00	.375	2.38
9X 3X .250/ .313T	10.85	164.5	16.7	158.4	1.8	1.0	3.19	9.31	.250	3.00	.313	2.61
8X 4X .250/ .313T	11.05	151.9	17.1	144.7	1.7	1.0	3.25	8.31	.250	4.00	.313	2.36
8X 3X .250/ .438T	11.25	155.8	17.5	150.2	1.7	1.0	3.31	8.44	.250	3.00	.438	2.39
11.49	175.7	18.4	175.3	175.3	1.8	1.0	3.38	9.38	.250	3.00	.375	2.63
10X 3X .250/ .313T	11.70	194.7	19.2	200.1	2.0	1.0	3.44	10.31	.250	3.00	.313	2.86
8X 4X .250/ .375T	11.90	163.5	19.1	162.4	1.8	1.0	3.50	8.38	.250	4.00	.375	2.38
9X 3X .250/ .438T	12.10	186.3	20.2	192.2	1.9	1.0	3.56	9.44	.250	3.00	.438	2.64
10X 3X .250/ .375T	12.34	206.8	21.1	220.4	2.1	1.1	3.63	10.38	.250	3.00	.375	2.88
12.75	213.5	22.5	232.6	232.6	2.1	1.1	3.75	10.31	.250	4.00	.313	2.86
9X 5X .250/ .313T	12.95	197.2	22.6	211.9	2.0	1.1	3.81	9.31	.250	5.00	.313	2.61
8X 5X .250/ .375T	13.19	179.0	22.3	188.8	1.9	1.1	3.88	8.38	.250	5.00	.375	2.38
10X 4X .250/ .375T	13.60	227.8	25.0	259.6	2.2	1.1	4.00	10.38	.250	4.00	.375	2.88
10X 5X .250/ .313T	13.80	230.0	25.7	264.5	2.3	1.1	4.06	10.31	.250	5.00	.313	2.86
9X 5X .250/ .438T	14.04	211.7	25.6	239.5	2.1	1.1	4.13	9.38	.250	5.00	.438	2.63
14.25	190.7	24.9	210.6	210.6	2.0	1.1	4.19	8.44	.250	5.00	.375	2.39
10X 4X .250/ .438T	14.45	240.8	27.6	286.2	2.3	1.2	4.25	10.44	.250	4.00	.438	2.89
10X 5X .250/ .375T	14.89	245.8	28.9	297.9	2.4	1.2	4.38	10.38	.250	5.00	.375	2.88
15.10	225.0	28.5	267.1	267.1	2.3	1.2	4.44	9.44	.250	5.00	.438	2.64
9X 6X .250/ .375T	15.30	226.2	29.1	270.5	2.3	1.2	4.50	9.38	.250	6.00	.375	2.63

1.1250 - 1 1/8 in.



1.125 IN. PLATE (AREA= 48.09 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS			FLANGE		SHEAR				
8X 5X	.250/ .438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
10X 5X	.250/ .438T	15.74	204.7	28.6	240.1	2.1	1.2	8.4	4.63	8.44	.250	6.00	.438	2.39
10X 6X	.250/ .438T	15.95	260.2	32.2	331.3	2.5	1.3	10.3	4.69	10.44	.250	5.00	.438	2.89
10X 7X	.250/ .438T	16.15	261.8	32.9	336.0	2.5	1.3	10.2	4.75	10.38	.250	6.00	.438	2.88
8X 7X	.250/ .375T	16.59	239.2	32.6	301.6	2.4	1.3	9.2	4.88	9.38	.250	7.00	.375	2.63
8X 7X	.250/ .438T	17.20	216.9	32.3	268.9	2.2	1.2	8.3	5.06	8.44	.250	7.00	.438	2.39
10X 7X	.250/ .375T	17.44	275.8	36.8	373.8	2.7	1.4	10.1	5.13	10.38	.250	7.00	.375	2.88
9X 7X	.250/ .438T	18.05	253.5	36.7	338.8	2.5	1.3	9.2	5.31	9.44	.250	7.00	.438	2.64
10X 4X	.313/ .563T	18.29	267.8	34.8	368.0	2.6	1.3	10.3	5.38	10.56	.313	4.00	.563	3.66
12X 4X	.313/ .406T	18.29	310.7	36.2	438.7	2.9	1.4	12.1	5.38	12.41	.313	4.00	.406	4.24
8X 8X	.250/ .438T	18.70	227.7	36.0	297.4	2.4	1.3	8.3	5.50	8.44	.250	8.00	.438	2.39
10X 7X	.250/ .438T	18.90	290.9	41.3	417.9	2.8	1.4	10.1	5.56	10.44	.250	7.00	.438	2.89
12X 4X	.313/ .469T	19.14	323.6	39.2	475.1	3.0	1.5	12.1	5.63	12.47	.313	4.00	.469	4.26
9X 8X	.250/ .438T	19.55	265.3	40.8	374.0	2.6	1.4	9.2	5.75	9.44	.250	8.00	.438	2.64
12X 5X	.313/ .406T	19.65	330.0	41.1	495.1	3.0	1.5	12.0	5.78	12.41	.313	5.00	.406	4.24
12X 4X	.313/ .531T	19.99	335.9	42.2	512.1	3.1	1.5	12.1	5.88	12.53	.313	4.00	.531	4.27
10X 8X	.250/ .438T	20.40	303.6	45.8	460.4	2.9	1.5	10.0	6.00	10.44	.250	8.00	.438	2.89
12X 5X	.313/ .469T	20.71	344.2	44.9	540.4	3.2	1.6	12.0	6.09	12.47	.313	5.00	.469	4.26
12X 6X	.313/ .406T	21.05	347.0	46.2	551.4	3.2	1.6	11.9	6.19	12.41	.313	6.00	.406	4.24
12X 5X	.313/ .531T	21.79	357.3	48.8	586.0	3.3	1.6	12.0	6.41	12.53	.313	5.00	.531	4.27
12X 6X	.313/ .469T	22.31	361.9	50.7	604.6	3.3	1.7	11.9	6.56	12.47	.313	6.00	.469	4.26
12X 7X	.313/ .406T	22.41	362.4	51.2	607.5	3.3	1.7	11.9	6.59	12.41	.313	7.00	.406	4.24
12X 6X	.313/ .531T	23.60	375.6	55.3	658.5	3.5	1.8	11.9	6.94	12.53	.313	6.00	.531	4.27
12X 7X	.313/ .469T	23.90	377.6	56.5	668.5	3.5	1.8	11.8	7.03	12.47	.313	7.00	.469	4.26
14X 4X	.375/ .469T	24.24	403.1	52.1	719.2	3.6	1.8	13.8	7.13	14.47	.375	4.00	.469	5.85
14X 4X	.375/ .531T	25.09	415.3	55.5	766.9	3.7	1.8	13.8	7.38	14.53	.375	4.00	.531	5.87
12X 7X	.313/ .531T	25.40	391.4	61.9	729.6	3.6	1.9	11.8	7.47	12.53	.313	7.00	.531	4.27
12X 8X	.313/ .469T	25.50	391.3	62.4	731.2	3.6	1.9	11.7	7.50	12.47	.313	8.00	.469	4.26
14X 4X	.375/ .594T	25.94	426.8	59.0	814.6	3.8	1.9	13.8	7.63	14.59	.375	4.00	.594	5.89
12X 5X	.375/ .656T	26.45	382.0	59.1	706.0	3.6	1.8	11.9	7.78	12.66	.375	5.00	.656	5.17
14X 4X	.375/ .656T	26.79	437.6	62.4	862.3	3.9	2.0	13.8	7.88	14.66	.375	4.00	.656	5.92
14X 5X	.375/ .531T	26.89	437.2	63.1	883.6	3.9	2.0	13.7	7.91	14.53	.375	5.00	.531	5.87
12X 8X	.313/ .531T	27.20	405.2	68.5	799.6	3.8	2.0	11.7	8.00	12.53	.313	8.00	.531	4.27
14X 6X	.375/ .531T	28.70	456.3	70.8	959.1	4.1	2.1	13.6	8.44	14.53	.375	6.00	.531	5.87
14X 5X	.375/ .656T	29.00	461.0	71.8	980.4	4.2	2.1	13.7	8.53	14.66	.375	5.00	.656	5.92
14X 7X	.375/ .469T	29.00	458.2	72.1	971.6	4.1	2.1	13.5	8.53	14.47	.375	7.00	.469	5.85
12X 9X	.313/ .531T	29.00	417.2	75.0	867.7	3.9	2.1	11.6	8.53	12.53	.313	9.00	.531	4.27
14X 6X	.375/ .594T	29.95	468.9	75.9	1026.9	4.2	2.2	13.5	8.81	14.59	.375	6.00	.594	5.89
14X 7X	.375/ .531T	30.50	472.4	78.2	1050.9	4.3	2.2	13.4	8.97	14.53	.375	7.00	.531	5.87
14X 8X	.375/ .469T	30.60	472.3	78.8	1052.8	4.3	2.2	13.4	9.00	14.47	.375	8.00	.469	5.85
12X 10X	.313/ .531T	31.5	427.9	81.5	934.7	4.0	2.2	11.5	9.06	12.53	.313	10.00	.531	4.27
14X 6X	.375/ .656T	31.25	480.6	81.1	1095.6	4.4	2.3	13.5	9.19	14.66	.375	6.00	.656	5.92
14X 7X	.375/ .594T	31.99	485.4	84.4	1159.5	4.4	2.3	13.4	9.41	14.59	.375	7.00	.594	5.89
14X 8X	.375/ .531T	32.30	486.9	85.8	1142.3	4.5	2.3	13.3	9.50	14.53	.375	8.00	.531	5.87
16X 5X	.438/ .531T	32.84	518.0	80.5	1230.0	4.6	2.4	15.3	9.66	16.53	.438	5.00	.531	7.73
16X 5X	.438/ .594T	33.90	530.4	85.4	1303.1	4.7	2.5	15.3	9.97	16.59	.438	5.00	.594	7.76

1.1250 - 1 1/8 in.

.....

1.1250 - 1 1/8 in.



1.125 IN. PLATE (AREA= 48.09 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL						THICK	WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	837.5	214.2	7.7	4.6	16.1	17.38	21.63	.500	11.00	.625	11.38
21X 8X .500/.875T	59.50	844.4	215.8	7.8	4.7	16.3	17.50	21.88	.500	8.00	.875	11.50
21X10X .500/.750T	61.20	851.1	226.6	7.9	4.8	15.1	18.00	21.75	.500	10.00	.750	11.44
21X11X .500/.688T	61.40	851.2	228.1	7.9	4.8	18.0	18.06	21.69	.500	11.00	.688	11.41
21X13X .500/.688T	66.10	873.3	256.7	8.2	5.2	17.6	19.44	21.69	.500	13.00	.688	11.41
21X12X .500/.750T	66.30	875.2	257.6	8.2	5.2	17.7	19.50	21.75	.500	12.00	.750	11.44
21X11X .508/.875T	68.44	886.3	269.9	8.4	5.4	17.6	20.13	21.88	.500	11.00	.875	11.50
24X 9X .625/.750T	73.95	964.2	270.6	8.8	5.7	20.2	21.75	24.75	.625	9.00	.750	16.17
24X10X .625/.750T	76.50	979.5	288.2	9.0	5.9	20.0	22.50	24.75	.625	10.00	.750	16.17
24X11X .625/.750T	79.05	993.1	305.5	9.2	6.1	19.8	23.25	24.75	.625	11.00	.750	16.17
24X10X .625/.875T	80.75	1003.7	316.2	9.3	6.2	19.8	23.75	24.88	.625	10.00	.875	16.25
24X 9X .625/1.125T	85.44	1029.6	346.5	9.6	6.6	19.6	25.13	25.13	.625	9.00	1.125	16.41
24X13X .625/.875T	89.69	1041.6	377.0	9.8	6.9	19.1	26.38	24.88	.625	13.00	.875	16.25
24X14X .625/.875T	92.65	1052.3	397.3	10.0	7.1	18.9	27.25	24.88	.625	14.00	.875	16.25
24X11X .625/1.125T	93.09	1058.8	398.6	10.2	7.2	19.1	27.38	25.13	.625	11.00	1.125	16.41
24X12X .625/1.125T	96.90	1071.1	424.4	10.2	7.5	18.8	28.50	25.13	.625	12.00	1.125	16.41
27X 9X .688/1.125T	37.55	1164.5	413.8	10.8	7.7	21.6	28.69	28.13	.688	9.00	1.125	20.13
24X16X .625/.875T	98.60	1070.9	437.7	10.2	7.5	21.2	29.06	27.88	.625	16.00	.875	16.25
27X12X .688/.875T	98.90	1166.1	425.8	10.8	7.8	21.2	29.06	27.88	.688	12.00	.875	19.96
27X13X .688/.875T	101.88	1178.9	448.4	11.0	8.0	21.0	29.94	27.88	.688	13.00	.875	19.96
27X11X .688/1.125T	105.20	1197.3	472.0	11.2	8.3	21.0	30.94	28.13	.688	11.00	1.125	20.13
30X13X .750/.875T	115.19	1318.6	526.7	12.1	9.1	22.9	33.88	30.88	.750	13.00	.875	24.88
27X14X .688/1.125T	116.65	1235.3	558.0	11.7	9.1	28.2	34.31	28.13	.688	14.00	1.125	28.13
30X11X .750/1.125T	118.59	1338.3	552.5	12.3	9.4	22.8	34.88	31.13	.750	11.00	1.125	24.19
27X15X .688/1.125T	120.50	1246.2	587.3	11.8	9.4	19.9	35.44	28.13	.688	15.00	1.125	20.13
30X12X .750/1.125T	122.40	1354.1	584.5	12.5	9.7	22.5	36.00	31.13	.750	12.00	1.125	24.19
30X16X .750/.875T	124.10	1355.5	601.0	12.6	9.8	22.2	36.50	30.88	.750	16.00	.875	24.00
27X16X .688/1.125T	124.30	1255.8	615.7	11.9	9.6	19.6	36.56	28.13	.688	16.00	1.125	20.13
30X14X .750/1.125T	130.05	1381.5	647.8	12.8	10.3	22.0	38.25	31.13	.750	14.00	1.125	24.19
30X10X .875/1.375T	136.00	1367.9	614.5	12.5	10.1	22.4	40.00	31.38	.875	10.00	1.375	28.44
33X12X .875/1.125T	144.09	1505.2	692.0	13.6	11.1	24.2	42.38	34.13	.875	12.00	1.125	30.85
33X10X .875/1.375T	144.94	1513.4	695.8	13.7	11.2	24.3	42.63	34.38	.875	10.00	1.375	31.07
36X10X .875/1.125T	145.35	1613.1	731.0	14.3	11.6	26.7	42.75	37.13	.875	10.00	1.125	33.47
33X14X .875/1.375T	149.60	1532.9	708.0	13.9	11.5	24.0	44.00	34.38	.875	11.00	1.375	31.07
33X14X .875/1.125T	151.74	1535.9	760.2	13.9	11.7	23.6	44.63	34.13	.875	14.00	1.125	30.85
36X10X .875/1.500T	156.10	1682.6	820.5	15.0	12.7	26.0	46.50	37.50	.875	10.00	1.500	33.80
36X14X .875/1.375T	172.55	1735.3	962.1	15.5	13.7	24.8	50.75	37.38	.875	14.00	1.375	33.69
36X15X .875/1.500T	183.60	1772.2	1066.5	15.9	14.5	24.1	54.00	37.50	.875	15.00	1.500	33.80

1.1250 - 1 1/8 in.

1.250 IN. PLATE (AREA= 59.30 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		BEAM DIMENSIONS		FLANGE		SHEAR	
WT/FT		ZPL		R		AREA		THICK	
3X 2X .125/ .188T		22.5		.5		.75		.125	
4X 2X .125/ .188T		29.7		.6		.90		.125	
3X 3X .125/ .188T		25.9		.5		.94		.125	
5X 2X .125/ .188T		39.1		.7		1.00		.125	
4X 3X .125/ .188T		34.8		.6		1.06		.125	
5X 3X .125/ .188T		46.7		.7		1.19		.125	
4X 2X .188/ .313T		39.4		.7		1.30		.188	
3X 3X .188/ .313T		33.8		.6		1.50		.188	
5X 2X .188/ .313T		53.2		.8		1.75		.188	
6X 2X .188/ .313T		70.4		.9		1.81		.188	
7X 2X .188/ .313T		82.4		1.0		1.88		.188	
5X 3X .188/ .313T		64.6		.9		1.88		.188	
5X 4X .188/ .313T		66.1		.9		1.94		.188	
7X 3X .188/ .313T		97.0		1.1		2.06		.188	
6X 4X .188/ .313T		87.0		1.1		2.13		.188	
7X 4X .188/ .313T		74.7		1.0		2.25		.188	
7X 3X .188/ .313T		107.7		1.2		2.31		.188	
6X 4X .188/ .313T		97.7		1.1		2.38		.188	
8X 4X .188/ .313T		123.4		1.3		2.56		.188	
9X 5X .188/ .313T		109.6		1.2		2.69		.188	
6X 3X .250/ .438T		105.1		1.2		2.88		.250	
7X 5X .188/ .313T		138.1		1.4		3.06		.250	
6X 4X .250/ .438T		111.3		1.3		3.13		.250	
7X 3X .250/ .438T		132.9		1.4		3.13		.250	
8X 3X .250/ .438T		153.3		1.5		3.13		.250	
9X 3X .250/ .438T		172.5		1.6		3.19		.250	
8X 4X .250/ .438T		159.4		1.6		3.25		.250	
9X 3X .250/ .438T		163.7		1.6		3.30		.250	
10X 3X .250/ .438T		195.1		1.7		3.44		.250	
11X 3X .250/ .438T		205.5		1.8		3.50		.250	
8X 4X .250/ .438T		172.5		1.6		3.56		.250	
9X 4X .250/ .438T		197.1		1.8		3.63		.250	
10X 3X .250/ .438T		219.3		1.9		3.75		.250	
12X 3X .250/ .438T		227.1		2.0		3.81		.250	
12X 5X .250/ .438T		209.8		1.9		3.88		.250	
13X 5X .250/ .438T		190.4		1.8		4.00		.250	
13X 6X .250/ .438T		243.7		2.1		4.06		.250	
14X 5X .250/ .438T		226.7		2.0		4.19		.250	
14X 6X .250/ .438T		204.1		1.9		4.25		.250	
14X 8X .250/ .438T		259.0		2.2		4.30		.250	
15X 5X .250/ .438T		242.4		2.1		4.44		.250	
15X 6X .250/ .438T		243.9		2.1		4.50		.250	

1.2500 - 1 1/4 in.



1.250 IN. PLATE (AREA= 59.38 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS				FLANGE		SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	
8X 6X .250/.438T	15.74	220.8	29.2	250.0	2.0	1.1	8.6	4.63	8.44	.250	.438	2.42
10X 5X .250/.438T	15.95	282.3	32.8	343.1	2.3	1.2	10.5	4.69	10.44	.250	.438	2.92
10X 6X .250/.438T	16.15	284.3	33.4	347.9	2.3	1.2	10.4	4.75	10.38	.250	.375	2.91
9X 7X .250/.375T	16.59	259.7	33.2	313.1	2.2	1.2	9.4	4.08	9.38	.250	.375	2.66
8X 7X .250/.438T	17.20	235.6	32.9	280.0	2.1	1.2	8.5	5.06	8.44	.250	.438	2.42
10X 7X .250/.375T	17.44	301.5	37.4	387.2	2.4	1.3	10.3	5.13	10.38	.250	.375	2.91
9X 7X .250/.438T	18.05	277.2	37.3	351.8	2.3	1.3	9.4	5.31	9.44	.250	.438	2.67
10X 4X .313/.563T	18.29	292.5	35.4	373.2	2.4	1.3	10.5	5.38	10.56	.313	.400	3.70
12X 4X .313/.406T	18.29	340.4	36.8	453.3	2.6	1.3	12.3	5.38	12.41	.313	.406	4.28
8X 8X .250/.438T	18.70	248.9	36.7	309.7	2.2	1.2	8.4	5.50	8.44	.250	.438	2.42
10X 7X .250/.438T	18.90	320.2	41.9	433.0	2.6	1.4	10.3	5.56	10.44	.250	.438	2.92
12X 4X .313/.469T	19.14	356.1	39.8	491.0	2.7	1.4	12.3	5.63	12.47	.313	.469	4.29
9X 8X .250/.438T	19.55	291.9	41.5	388.5	2.4	1.3	9.4	5.75	9.44	.250	.438	2.67
12X 5X .313/.406T	19.65	364.0	41.8	511.8	2.8	1.4	12.3	5.78	12.41	.313	.406	4.28
12X 4X .313/.531T	19.93	371.1	42.8	529.3	2.8	1.4	12.4	5.88	12.53	.313	.400	4.31
10X 8X .250/.438T	20.48	336.2	46.5	477.5	2.7	1.4	10.3	6.00	10.44	.250	.438	2.92
12X 5X .313/.469T	20.71	381.5	45.6	558.7	2.9	1.5	12.3	6.09	12.47	.313	.469	4.29
12X 6X .313/.406T	21.05	385.1	46.8	570.3	2.9	1.5	12.2	6.19	12.41	.313	.406	4.28
12X 5X .313/.531T	21.79	397.8	49.5	606.2	3.0	1.5	12.3	6.41	12.53	.313	.500	4.31
12X 6X .313/.469T	22.30	403.7	51.4	625.6	3.1	1.5	12.2	6.56	12.47	.313	.469	4.29
12X 7X .313/.406T	22.41	404.4	51.9	628.6	3.1	1.6	12.1	6.59	12.41	.313	.406	4.28
12X 6X .313/.531T	23.60	420.9	56.1	681.8	3.2	1.6	12.2	6.94	12.53	.313	.531	4.31
12X 7X .313/.469T	23.90	423.6	57.3	692.3	3.2	1.6	12.1	7.03	12.47	.313	.469	4.29
14X 4X .375/.469T	24.24	451.6	52.8	743.4	3.3	1.6	14.1	7.13	14.47	.375	.469	5.90
14X 4X .375/.531T	25.09	466.7	56.3	793.0	3.4	1.7	14.1	7.38	14.53	.375	.400	5.92
12X 7X .313/.531T	25.40	441.2	62.7	756.2	3.4	1.7	12.1	7.47	12.53	.313	.531	4.31
12X 8X .313/.469T	25.50	441.2	63.2	758.0	3.4	1.7	12.0	7.50	12.47	.313	.469	4.29
14X 4X .375/.594T	25.94	481.0	59.8	842.6	3.5	1.8	14.1	7.63	14.59	.375	.594	5.94
12X 5X .375/.656T	26.45	430.2	60.0	732.1	3.3	1.7	12.2	7.78	12.66	.375	.656	5.22
14X 4X .375/.656T	26.79	494.5	63.3	892.3	3.6	1.8	14.1	7.88	14.66	.375	.656	5.97
14X 5X .375/.531T	26.89	494.3	64.0	893.7	3.6	1.8	14.0	7.91	14.53	.375	.531	5.92
12X 8X .313/.531T	27.20	459.2	69.3	829.7	3.5	1.8	12.0	8.00	12.53	.313	.800	4.31
14X 6X .375/.531T	28.70	518.5	71.7	993.7	3.8	1.9	13.9	8.44	14.53	.375	.600	5.92
14X 5X .375/.656T	29.00	524.4	72.7	1015.7	3.9	1.9	14.0	8.53	14.66	.375	.656	5.97
14X 7X .375/.469T	29.00	521.1	73.0	1006.7	3.9	1.9	13.8	8.53	14.47	.375	.700	5.90
12X 9X .313/.531T	29.00	474.9	75.9	901.5	3.6	1.9	11.9	8.53	12.53	.313	.900	4.31
14X 6X .375/.594T	29.95	534.6	76.9	1064.6	4.0	2.0	13.8	8.81	14.59	.375	.594	5.94
14X 7X .375/.531T	30.50	539.3	79.2	1089.9	4.0	2.0	13.8	8.97	14.53	.375	.700	5.92
14X 8X .375/.469T	30.60	539.3	79.7	1092.0	4.0	2.0	13.7	9.00	14.47	.375	.800	5.90
12X 10X .313/.531T	30.80	489.1	82.4	972.2	3.8	2.0	11.8	9.06	12.53	.313	.1000	4.31
14X 6X .375/.656T	31.25	549.7	82.1	1136.7	4.1	2.1	13.8	9.19	14.66	.375	.600	5.97
14X 7X .375/.594T	31.99	556.0	85.4	1172.5	4.1	2.1	13.7	9.41	14.59	.375	.594	5.94
14X 8X .375/.531T	32.30	558.2	86.9	1186.1	4.1	2.1	13.7	9.50	14.53	.375	.800	5.92
16X 5X .438/.531T	32.84	593.1	81.6	1274.9	4.3	2.1	15.6	9.66	16.53	.438	.500	7.79
16X 5X .438/.594T	33.90	608.7	86.5	1351.5	4.4	2.2	15.6	9.97	16.59	.438	.500	7.81

1.2500 - 1 1/4 in.

1.250 IN. PLATE (AREA= 59.38 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YP	YF	***** BEAM *****		DIMENSIONS *****		SHEAR AREA
WT/FT	ZPL	ZFL	WT/FT	ZPL	ZFL				DEPTH	WEB THICK	WIDTH	FLANGE THICK	
14X 8X .375/ .594T	34.00	575.5	94.0	1280.0	4.3	2.2	13.6	10.00	14.59	.375	8.00	.594	5.94
14X 9X .375/ .531T	34.10	574.8	94.4	1280.0	4.3	2.2	13.6	10.03	14.53	.375	9.00	.531	5.92
16X 6X .438/ .531T	34.65	617.7	90.3	1400.0	4.5	2.3	15.5	10.19	16.53	.438	6.00	.531	7.79
16X 5X .438/ .656T	34.95	623.5	91.4	1428.1	4.5	2.3	15.6	10.28	16.66	.438	5.00	.656	7.84
12X10X .375/ .594T	35.50	505.8	93.1	1088.1	3.9	2.2	11.7	10.44	12.59	.375	10.00	.594	5.19
14X 8X .375/ .656T	35.70	590.7	100.9	1370.9	4.4	2.3	13.6	10.50	14.66	.375	8.00	.656	5.97
16X 6X .438/ .594T	35.90	634.0	96.2	1490.0	4.6	2.4	15.5	10.56	16.59	.438	6.00	.594	7.81
14X10X .375/ .531T	35.90	589.8	102.0	1372.8	4.4	2.3	13.5	10.56	14.53	.375	10.00	.531	5.92
16X 5X .438/ .719T	36.01	637.4	96.4	1504.4	4.6	2.4	15.6	10.59	16.72	.438	5.00	.719	7.87
14X 9X .375/ .594T	36.01	592.1	102.4	1383.2	4.4	2.3	13.5	10.59	14.59	.375	9.00	.594	5.94
16X 6X .438/ .656T	37.20	649.4	102.1	1580.4	4.7	2.4	15.5	10.94	16.66	.438	6.00	.656	7.84
18X 6X .438/ .531T	37.60	714.0	105.9	1824.6	5.1	2.6	17.2	11.06	18.53	.438	6.00	.531	8.66
18X 5X .438/ .656T	37.94	719.9	107.2	1858.4	5.1	2.6	17.3	11.16	18.66	.438	5.00	.656	8.72
14X10X .375/ .594T	38.05	607.1	111.0	1486.2	4.6	2.4	13.4	11.19	14.59	.375	10.00	.594	5.94
16X 6X .438/ .719T	38.45	663.9	108.1	1669.9	4.9	2.5	15.5	11.31	16.72	.438	6.00	.719	7.87
18X 6X .438/ .594T	38.90	731.5	112.7	1937.2	5.2	2.6	17.2	11.44	18.59	.438	6.00	.594	8.69
18X 5X .438/ .719T	39.00	734.5	112.8	1952.0	5.2	2.7	17.3	11.47	18.72	.438	5.00	.719	8.75
16X 8X .438/ .594T	39.95	675.5	115.4	1758.6	5.0	2.6	15.2	11.75	16.59	.438	8.00	.594	7.81
16X 9X .438/ .531T	40.05	675.3	115.4	1760.8	5.0	2.6	15.2	11.78	16.53	.438	9.00	.531	7.79
14X11X .375/ .594T	40.05	621.0	119.6	1588.5	4.7	2.6	13.3	11.78	14.59	.375	11.00	.594	5.94
18X 7X .438/ .594T	40.90	754.7	123.3	2103.5	5.4	2.8	17.1	12.03	18.59	.438	7.00	.594	8.69
18X 8X .438/ .531T	41.24	757.2	125.3	2127.1	5.5	2.8	17.0	12.13	18.53	.438	8.00	.531	8.66
18X 6X .438/ .719T	41.45	762.6	125.8	2156.8	5.5	2.8	17.1	12.19	18.72	.438	6.00	.719	8.75
16X10X .438/ .531T	41.85	691.3	124.8	1879.9	5.1	2.7	15.1	12.31	16.53	.438	10.00	.531	7.79
16X 9X .438/ .594T	41.96	693.2	125.1	1890.2	5.1	2.7	15.1	12.34	16.59	.438	9.00	.594	7.81
18X 7X .438/ .656T	42.40	768.5	130.6	2223.1	5.6	2.9	17.0	12.47	18.66	.438	7.00	.656	8.72
14X11X .375/ .656T	42.40	636.2	129.1	1707.7	4.9	2.7	13.2	12.47	14.66	.375	11.00	.656	5.97
18X 9X .438/ .531T	43.04	775.5	134.9	2273.5	5.6	2.9	16.8	12.66	18.53	.438	9.00	.531	8.66
16X10X .438/ .594T	44.00	709.2	134.8	2021.3	5.3	2.9	15.0	12.94	16.59	.438	10.00	.594	7.81
18X 8X .438/ .656T	44.64	792.6	143.0	2412.4	5.8	3.0	16.9	13.13	18.66	.438	8.00	.656	8.72
16X11X .438/ .594T	46.00	723.1	144.3	2146.2	5.4	3.0	14.9	13.53	16.59	.438	11.00	.594	7.81
16X10X .438/ .656T	46.10	725.4	144.7	2160.1	5.4	3.0	14.9	13.56	16.66	.438	10.00	.656	7.84
18X 9X .438/ .656T	46.85	811.7	154.9	2590.5	6.0	3.2	16.7	13.78	18.66	.438	9.00	.656	8.72
16X10X .438/ .594T	46.95	811.3	155.8	2593.1	6.0	3.2	16.6	13.81	18.59	.438	10.00	.594	8.69
16X10X .438/ .719T	48.25	740.6	154.8	2300.8	5.6	3.1	14.9	14.19	16.72	.438	10.00	.719	7.87
16X11X .438/ .656T	48.35	739.7	155.4	2299.7	5.6	3.1	14.8	14.22	16.66	.438	11.00	.656	7.84
18X10X .438/ .656T	49.10	828.5	166.8	2764.9	6.1	3.3	16.6	14.44	18.66	.438	10.00	.656	8.72
16X11X .438/ .719T	50.69	754.3	166.2	2447.9	5.7	3.2	14.7	14.91	16.72	.438	11.00	.719	7.87
18X11X .438/ .656T	51.31	843.7	178.6	2935.3	6.3	3.5	16.4	15.09	18.66	.438	11.00	.656	8.72
21X 8X .500/ .625T	52.70	935.5	177.6	3415.1	6.8	3.7	19.2	15.50	21.63	.500	8.00	.625	11.44
18X12X .438/ .656T	53.55	857.3	190.5	3103.4	6.4	3.6	16.3	15.75	18.66	.438	12.00	.656	8.72
21X 8X .500/ .688T	54.40	952.7	187.8	3599.5	6.9	3.8	19.2	16.00	21.69	.500	8.00	.688	11.47
21X 8X .500/ .750T	56.10	968.4	197.9	3779.7	7.1	3.9	19.1	16.50	21.75	.500	8.00	.750	11.50
21X10X .500/ .625T	56.95	972.9	203.6	3852.4	7.1	4.0	18.9	16.75	21.63	.500	10.00	.625	11.44
21X 9X .500/ .750T	58.65	989.0	213.8	4043.7	7.3	4.1	18.9	17.25	21.75	.500	9.00	.750	11.50

1.2500 - 1 1/4 in.



1.250 IN. PLATE (AREA= 59.36 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	989.5	216.9	4070.1	7.3	4.1	18.8	17.38	21.63	.500	11.00	.625	11.44
21X 8X .500/.875T	59.50	997.9	218.5	4155.9	7.3	4.2	19.0	17.50	21.88	.500	8.00	.875	11.57
21X10X .500/.750T	61.20	1006.9	229.4	4296.5	7.5	4.3	18.7	18.00	21.75	.500	10.00	.750	11.50
21X11X .500/.688T	61.40	1007.1	230.9	4399.0	7.5	4.3	18.7	18.06	21.69	.500	11.00	.688	11.47
21X13X .500/.750T	66.10	1035.9	259.8	4794.9	7.8	4.6	18.3	19.44	21.69	.500	13.00	.688	11.47
21X12X .500/.750T	66.30	1038.3	260.7	4793.4	7.8	4.6	18.4	19.50	21.75	.500	12.00	.750	11.50
21X11X .500/.875T	68.44	1052.5	273.1	5016.1	7.9	4.8	18.4	20.13	21.88	.500	11.00	.875	11.57
24X 9X .625/.750T	73.95	1142.3	274.6	5756.4	8.4	5.2	21.0	21.75	24.75	.625	10.00	.750	16.25
24X10X .625/.750T	76.50	1161.6	292.5	6074.4	8.6	5.4	20.6	23.25	24.75	.625	11.00	.750	16.25
24X11X .625/.750T	79.05	1178.7	309.9	6380.3	8.8	5.4	20.6	23.25	24.75	.625	10.00	.750	16.25
24X10X .625/.875T	80.75	1192.0	320.8	6604.8	8.9	5.5	20.6	23.75	25.13	.625	10.00	.875	16.33
24X 9X .825/1.125T	85.44	1224.5	351.5	7295.1	9.2	5.9	20.5	25.13	25.13	.625	9.00	1.125	16.49
24X13X .625/.875T	89.69	1240.3	382.4	7637.2	9.4	6.2	20.0	26.38	24.88	.625	13.00	.875	16.33
24X14X .625/.875T	92.65	1253.9	403.0	7968.7	9.6	6.4	19.8	27.25	24.88	.625	14.00	.875	16.33
24X11X .825/1.125T	93.09	1261.8	404.3	8078.0	9.6	6.4	20.0	27.38	25.13	.625	11.00	1.125	16.49
24X12X .625/1.125T	96.90	1277.5	430.5	8494.7	9.8	6.6	19.7	28.50	25.13	.625	12.00	1.125	16.49
27X 9X .688/1.125T	97.55	1305.1	420.5	9477.6	10.4	6.8	22.5	28.69	28.13	.688	9.00	1.125	20.21
27X12X .688/.875T	98.60	1277.7	443.8	8607.6	9.9	6.7	19.4	29.06	27.88	.688	12.00	.875	16.33
27X13X .688/.875T	101.80	1403.5	455.4	10016.5	10.6	7.1	22.0	28.94	27.88	.688	13.00	.875	20.04
27X11X .688/1.125T	105.20	1426.2	479.5	10543.2	10.8	7.4	22.0	30.34	28.13	.688	11.00	1.125	20.21
30X13X .750/.875T	115.19	1568.2	535.9	12833.6	11.7	8.2	23.9	33.88	30.88	.750	13.00	.875	24.10
27X14X .688/1.125T	116.65	1473.9	566.8	12027.2	11.3	8.2	21.2	34.31	28.13	.688	14.00	1.125	20.21
30X11X .750/1.125T	118.59	1592.2	562.2	13454.2	11.9	8.4	23.9	34.88	31.13	.750	11.00	1.125	24.29
27X15X .688/1.125T	120.50	1487.7	596.5	12510.0	11.5	8.4	21.0	35.44	28.13	.688	15.00	1.125	20.21
30X12X .750/1.125T	122.40	1611.8	594.7	14066.2	12.1	8.7	23.7	36.00	31.13	.750	12.00	1.125	24.29
30X16X .750/.875T	124.10	1613.8	611.3	14265.5	12.2	8.8	23.3	36.50	30.88	.750	16.00	.875	24.10
27X16X .688/1.125T	124.30	1499.8	625.3	12965.9	11.6	8.6	20.7	36.56	28.13	.688	16.00	1.125	20.21
30X14X .750/1.125T	130.05	1645.6	659.0	15236.1	12.5	9.3	23.1	38.25	31.13	.750	14.00	1.125	24.29
30X10X .875/1.375T	135.00	1624.2	626.6	14754.0	12.2	9.1	23.5	40.00	31.38	.875	10.00	1.375	28.55
33X12X .875/1.125T	144.09	1785.8	705.9	17899.3	13.3	10.0	25.4	42.38	34.13	.875	12.00	1.125	30.96
33X10X .875/1.375T	144.94	1795.4	710.0	18129.0	13.3	10.1	25.5	42.63	34.38	.875	10.00	1.375	31.18
36X10X .875/1.125T	145.35	1911.2	716.4	19999.1	14.0	10.5	27.9	42.75	37.13	.875	10.00	1.125	33.58
33X11X .875/1.375T	149.60	1819.1	752.9	18972.4	13.5	10.4	25.2	44.00	34.38	.875	11.00	1.375	31.18
33X14X .875/1.125T	151.74	1823.0	775.3	19255.4	13.6	10.6	24.6	44.63	34.13	.875	14.00	1.125	30.96
36X10X .875/1.500T	158.10	1994.6	837.8	22862.2	14.7	11.5	27.3	46.50	37.50	.875	10.00	1.500	33.91
36X14X .875/1.375T	172.55	2058.4	981.8	25679.0	15.3	12.5	26.2	50.75	37.38	.875	14.00	1.375	33.80
36X15X .875/1.500T	183.60	2102.8	1088.4	27790.6	15.7	13.2	25.5	54.00	37.50	.875	15.00	1.500	33.91

1.2500 - 1 1/4 in.

1.375 IN. PLATE (AREA= 71.84 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS		R	VP	VF	***** BEAM DIMENSIONS *****		SHEAR AREA
3X 2X	WT./FT.	ZPL	ZFL				AREA	DEPTH	
4X 2X	1.25/ .188T	2.55	4.9	.5	.7	3.8	.75	3.19	THICK
5X 2X	1.25/ .188T	2.99	5.0	.6	.7	4.8	.88	4.19	THICK
6X 2X	1.25/ .188T	3.20	5.6	.5	.7	3.8	.94	3.19	THICK
7X 2X	1.25/ .188T	3.40	5.4	.7	.7	5.8	1.00	5.19	THICK
8X 2X	1.25/ .188T	3.60	5.8	.6	.7	4.8	1.06	4.19	THICK
9X 2X	1.25/ .188T	3.85	6.5	.7	.8	5.8	1.19	5.19	THICK
10X 2X	1.25/ .188T	4.05	6.5	.7	.8	4.9	1.38	4.31	THICK
11X 2X	1.25/ .188T	4.25	7.1	.6	.8	3.9	1.58	3.31	THICK
12X 2X	1.25/ .188T	4.45	7.4	.8	.8	5.9	1.56	5.31	THICK
13X 2X	1.25/ .188T	4.65	8.5	.9	.8	6.9	1.75	6.31	THICK
14X 2X	1.25/ .188T	4.85	8.8	1.0	.8	7.8	1.81	7.25	THICK
15X 2X	1.25/ .188T	5.05	9.2	.9	.8	5.9	1.94	5.31	THICK
16X 2X	1.25/ .188T	5.25	9.5	.9	.8	5.8	2.06	7.25	THICK
17X 2X	1.25/ .188T	5.45	10.7	1.1	.8	6.8	2.13	6.25	THICK
18X 2X	1.25/ .188T	5.65	11.0	1.0	.8	5.9	2.19	5.31	THICK
19X 2X	1.25/ .188T	5.85	10.9	.9	.8	7.8	2.25	7.31	THICK
20X 2X	1.25/ .188T	6.05	12.7	1.2	.9	7.8	2.31	7.25	THICK
21X 2X	1.25/ .188T	6.25	12.7	1.1	.9	6.8	2.38	6.31	THICK
22X 2X	1.25/ .188T	6.45	14.5	1.2	.9	7.8	2.56	7.31	THICK
23X 2X	1.25/ .188T	6.65	14.8	1.2	.9	6.8	2.69	6.31	THICK
24X 2X	1.25/ .188T	6.85	13.0	1.1	.9	6.9	2.81	6.44	THICK
25X 2X	1.25/ .188T	7.05	17.0	1.3	.9	7.8	2.88	7.31	THICK
26X 2X	1.25/ .188T	7.25	15.1	1.2	.9	6.9	3.00	6.38	THICK
27X 2X	1.25/ .188T	7.45	16.1	1.3	.9	7.9	3.06	7.44	THICK
28X 2X	1.25/ .188T	7.65	17.0	1.4	.9	8.8	3.13	8.38	THICK
29X 2X	1.25/ .188T	7.85	17.7	1.5	1.0	9.7	3.19	9.31	THICK
30X 2X	1.25/ .188T	8.05	18.1	1.5	1.0	8.7	3.25	8.31	THICK
31X 2X	1.25/ .188T	8.25	18.5	1.5	1.0	8.8	3.31	8.44	THICK
32X 2X	1.25/ .188T	8.45	19.5	1.6	1.0	9.6	3.38	9.38	THICK
33X 2X	1.25/ .188T	8.65	20.2	1.7	1.0	10.7	3.44	10.31	THICK
34X 2X	1.25/ .188T	8.85	20.2	1.7	1.0	8.8	3.50	8.38	THICK
35X 2X	1.25/ .188T	9.05	21.2	1.7	1.0	9.8	3.56	9.44	THICK
36X 2X	1.25/ .188T	9.25	22.1	1.8	1.0	10.7	3.63	10.38	THICK
37X 2X	1.25/ .188T	9.45	23.5	1.8	1.1	10.6	3.75	10.31	THICK
38X 2X	1.25/ .188T	9.65	23.7	1.7	1.0	9.6	3.81	9.31	THICK
39X 2X	1.25/ .188T	9.85	23.5	1.6	1.0	8.7	3.88	8.38	THICK
40X 2X	1.25/ .188T	10.05	26.1	1.9	1.1	10.7	4.00	10.38	THICK
41X 2X	1.25/ .188T	10.25	26.8	1.9	1.1	10.6	4.06	10.31	THICK
42X 2X	1.25/ .188T	10.45	26.7	1.8	1.1	9.7	4.13	9.38	THICK
43X 2X	1.25/ .188T	10.65	26.1	1.7	1.1	8.7	4.19	8.44	THICK
44X 2X	1.25/ .188T	10.85	28.7	2.0	1.1	10.7	4.25	10.44	THICK
45X 2X	1.25/ .188T	11.05	30.1	2.0	1.1	10.6	4.38	10.38	THICK
46X 2X	1.25/ .188T	11.25	29.7	1.9	1.1	9.7	4.44	9.44	THICK
47X 2X	1.25/ .188T	11.45	30.3	2.0	1.1	9.6	4.50	9.38	THICK
48X 2X	1.25/ .188T	11.65	30.3	2.0	1.1	9.6	4.50	9.38	THICK

1.3750 - 1 3/8 in.



1.375 IN. PLATE (AREA= 71.84 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				R	YP	VF	***** BEAM DIMENSIONS *****				SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	AREA	DEPTH				THICK	WIDTH	FLANGE THICK		
8X 6X .250/.438T	233.1	29.9	260.1	1.8	1.1	8.7	4.63	8.44	.250	6.00	.438	2.45	
10X 5X .250/.438T	299.2	33.4	354.7	2.2	1.2	10.6	4.69	10.44	.250	5.00	.438	2.95	
10X 6X .250/.375T	301.6	34.1	359.8	2.2	1.2	10.6	4.75	10.38	.250	6.00	.375	2.94	
9X 7X .250/.375T	275.6	33.9	324.6	2.1	1.2	9.6	4.88	9.38	.250	7.00	.375	2.69	
8X 7X .250/.438T	250.2	33.7	291.1	1.9	1.2	8.7	5.06	8.44	.250	7.00	.438	2.45	
10X 7X .250/.375T	321.8	38.1	400.3	2.3	1.2	10.5	5.13	10.38	.250	7.00	.375	2.94	
9X 7X .250/.438T	18.05	38.0	364.6	2.2	1.2	9.6	5.31	9.44	.250	7.00	.438	2.70	
10X 4X .313/.563T	311.9	36.1	386.1	2.2	1.2	10.7	5.38	10.56	.313	4.00	.563	3.74	
12X 4X .313/.406T	363.9	37.4	467.4	2.5	1.3	12.5	5.38	12.41	.313	4.00	.406	4.35	
8X 8X .250/.438T	18.70	37.4	322.0	2.0	1.2	8.6	5.50	8.44	.250	8.00	.438	2.45	
10X 7X .250/.438T	18.90	42.6	447.6	2.4	1.3	10.5	5.56	10.44	.250	7.00	.438	2.95	
12X 4X .313/.469T	382.2	40.4	506.2	2.6	1.3	12.5	5.63	12.47	.313	4.00	.469	4.33	
9X 8X .250/.438T	19.55	42.3	402.7	2.3	1.3	9.5	5.75	9.44	.250	8.00	.438	2.70	
12X 5X .313/.406T	391.5	42.4	527.7	2.6	1.3	12.4	5.78	12.41	.313	5.00	.406	4.31	
12X 4X .313/.531T	399.7	43.5	545.7	2.6	1.4	12.5	5.88	12.53	.313	4.00	.531	4.35	
10X 8X .250/.438T	363.0	47.2	493.7	2.5	1.4	10.5	6.00	10.44	.250	8.00	.438	2.95	
12X 5X .313/.469T	412.2	46.3	576.0	2.7	1.4	12.4	6.09	12.47	.313	5.00	.469	4.33	
12X 6X .313/.406T	416.6	47.5	588.0	2.7	1.4	12.4	6.19	12.41	.313	6.00	.406	4.31	
12X 5X .313/.531T	431.6	50.2	625.0	2.8	1.4	12.5	6.41	12.53	.313	5.00	.531	4.35	
12X 6X .313/.469T	438.8	52.1	645.2	2.9	1.5	12.4	6.56	12.47	.313	6.00	.469	4.33	
12X 7X .313/.406T	439.7	52.7	648.3	2.9	1.5	12.3	6.59	12.41	.313	7.00	.406	4.31	
12X 6X .313/.531T	459.6	56.8	703.3	3.0	1.5	12.4	6.94	12.53	.313	6.00	.531	4.35	
12X 7X .313/.469T	462.9	58.1	714.3	3.0	1.5	12.3	7.03	12.47	.313	7.00	.469	4.33	
14X 4X .375/.469T	493.0	53.6	765.6	3.1	1.6	14.3	7.13	14.47	.375	4.00	.469	5.94	
14X 4X .375/.531T	511.1	57.1	816.8	3.2	1.6	14.3	7.38	14.53	.375	4.00	.531	5.96	
12X 7X .313/.531T	484.5	53.5	780.6	3.1	1.6	12.3	7.47	12.53	.313	7.00	.531	4.35	
12X 8X .313/.469T	484.6	54.0	782.4	3.1	1.6	12.2	7.50	12.47	.313	8.00	.469	4.33	
14X 4X .375/.594T	528.2	60.6	868.1	3.3	1.6	14.3	7.63	14.59	.375	4.00	.594	5.99	
12X 5X .375/.656T	472.0	60.8	756.1	3.1	1.6	12.4	7.78	12.66	.375	5.00	.656	5.26	
14X 4X .375/.656T	544.5	64.1	919.5	3.4	1.7	14.3	7.88	14.66	.375	4.00	.656	6.01	
14X 5X .375/.531T	544.4	64.8	921.1	3.4	1.7	14.2	7.91	14.53	.375	5.00	.531	5.96	
12X 8X .313/.531T	506.7	70.2	857.0	3.3	1.7	12.2	8.00	12.53	.313	8.00	.531	4.35	
14X 6X .375/.531T	574.1	72.6	1024.6	3.6	1.8	14.1	8.44	14.53	.375	6.00	.531	5.96	
14X 5X .375/.656T	581.1	73.6	1047.4	3.6	1.8	14.2	8.53	14.66	.375	5.00	.656	6.01	
14X 7X .375/.469T	577.3	73.9	1038.2	3.6	1.8	14.0	8.53	14.47	.375	7.00	.469	5.94	
12X 9X .313/.531T	526.5	76.8	931.8	3.4	1.8	12.1	8.53	12.53	.313	9.00	.531	4.35	
14X 6X .375/.594T	593.8	77.8	1098.2	3.7	1.8	14.1	8.81	14.59	.375	6.00	.594	5.99	
14X 7X .375/.531T	599.9	80.2	1124.7	3.7	1.9	14.0	8.97	14.53	.375	7.00	.531	5.96	
14X 8X .375/.469T	599.9	80.7	1126.9	3.7	1.9	14.0	9.00	14.47	.375	8.00	.469	5.94	
12X 10X .313/.531T	544.5	83.4	1005.8	3.5	1.8	12.1	9.06	12.53	.313	10.00	.531	4.35	
14X 6X .375/.656T	612.5	83.1	1173.2	3.8	1.9	14.1	9.19	14.66	.375	6.00	.656	6.01	
14X 7X .375/.594T	620.6	86.4	1210.6	3.9	2.0	14.0	9.41	14.59	.375	7.00	.594	5.99	
14X 8X .375/.531T	623.4	87.9	1224.9	3.9	2.0	13.9	9.50	14.53	.375	8.00	.531	5.96	
16X 5X .438/.531T	661.9	82.6	1314.7	4.0	2.0	15.9	9.66	16.53	.438	5.00	.531	7.84	
16X 5X .438/.594T	681.0	87.6	1394.1	4.1	2.0	15.9	9.97	16.59	.438	5.00	.594	7.87	

1.3750 - 1 3/8 in.

AD-A048 989

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 11/6  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HIGH-STRENGTH STEELS --ETC(U)  
DEC 77 S F ZEMANEK, N S NAPPI

UNCLASSIFIED

DTNSRDC-77-0069

NL

2 OF 5

AD  
A048989



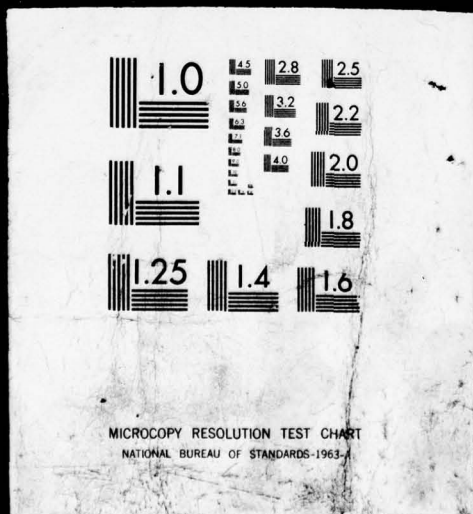


IFIED

2 OF 5

AD

A048989



1.375 IN. PLATE (AREA= 71.84 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				R	***** BEAM DIMENSIONS *****				FLANGE		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	YF	AREA	DEPTH	THICK	WEB	WIDTH	THICK	THICK	THICK	AREA
14X 8X .375/.594T	34.00	645.0	95.1	1322.8	4.0	2.1	13.9	10.00	14.59	.594	8.00	.594	5.99
14X 9X .375/.531T	34.10	644.4	95.5	1323.0	4.0	2.1	13.9	10.03	14.53	.531	9.00	.531	5.96
16X 6X .438/.531T	34.65	692.1	91.4	1445.4	4.2	2.1	15.8	10.19	16.53	.438	6.00	.531	7.84
16X 5X .438/.656T	34.95	699.1	92.5	1473.7	4.2	2.1	15.9	10.20	16.66	.438	5.00	.656	7.90
12X10X .375/.594T	35.50	566.8	94.2	1128.0	3.7	2.0	12.0	10.44	12.59	.375	10.00	.594	5.24
14X 8X .375/.656T	35.70	664.3	102.0	1417.9	4.1	2.1	13.9	10.50	14.66	.375	8.00	.656	6.01
16X 6X .438/.594T	35.90	712.3	97.3	1538.3	4.3	2.2	15.8	10.56	16.59	.438	6.00	.594	7.87
14X10X .375/.531T	35.90	663.4	103.2	1420.0	4.2	2.1	13.8	10.56	14.53	.375	10.00	.531	5.96
16X 5X .438/.719T	36.01	716.3	97.5	1553.2	4.3	2.2	15.9	10.59	16.72	.438	5.00	.719	7.93
14X 9X .375/.594T	36.01	666.2	103.6	1430.9	4.2	2.1	13.8	10.59	14.59	.375	9.00	.594	5.99
16X 6X .438/.656T	37.20	731.4	103.3	1632.5	4.4	2.2	15.8	10.94	16.66	.438	6.00	.656	7.90
18X 6X .438/.531T	37.60	805.8	107.1	1882.4	4.8	2.3	17.6	11.06	18.53	.438	6.00	.531	8.72
18X 5X .438/.656T	37.94	813.0	108.5	1917.5	4.8	2.4	17.7	11.16	18.66	.438	5.00	.656	8.78
14X10X .375/.594T	38.05	685.5	112.2	1538.9	4.3	2.2	13.7	11.19	14.59	.375	10.00	.594	5.99
16X 6X .438/.719T	38.45	749.4	109.3	1725.9	4.6	2.3	15.8	11.31	16.72	.438	6.00	.719	7.93
18X 6X .438/.594T	38.90	827.5	114.0	1999.6	4.9	2.4	17.5	11.44	18.59	.438	6.00	.594	8.74
18X 5X .438/.719T	39.00	831.1	114.0	2015.0	4.9	2.4	17.7	11.47	18.72	.438	5.00	.719	8.80
16X 8X .438/.594T	39.95	764.4	115.7	1818.9	4.7	2.4	15.6	11.75	16.59	.438	8.00	.594	7.87
18X 9X .438/.531T	40.05	764.2	117.3	1821.3	4.7	2.4	15.5	11.78	16.53	.438	9.00	.531	7.84
14X11X .375/.594T	40.05	703.4	120.9	1646.5	4.4	2.3	13.6	11.78	14.59	.594	11.00	.594	5.99
18X 7X .438/.594T	40.90	856.5	124.7	2173.3	5.1	2.5	17.4	12.03	18.59	.438	7.00	.594	8.74
18X 8X .438/.531T	41.24	859.8	126.7	2198.0	5.1	2.6	17.3	12.13	18.53	.438	8.00	.531	8.80
18X 6X .438/.719T	41.45	866.3	127.2	2228.8	5.2	2.6	17.5	12.19	18.72	.438	6.00	.719	8.80
16X10X .438/.594T	41.85	784.6	126.2	1946.1	4.8	2.5	15.4	12.31	16.53	.438	10.00	.531	7.84
16X 9X .438/.594T	41.96	786.8	126.4	1956.9	4.8	2.5	15.5	12.34	16.59	.438	9.00	.594	7.87
18X 7X .438/.656T	42.40	874.4	132.1	2298.8	5.2	2.6	17.4	12.47	18.66	.438	7.00	.656	8.78
14X11X .375/.656T	42.40	722.9	130.5	1772.2	4.6	2.5	13.6	12.47	14.66	.375	11.00	.656	6.81
18X 9X .438/.531T	43.04	882.9	136.4	2351.4	5.3	2.7	17.2	12.66	18.53	.438	9.00	.531	8.72
16X10X .438/.594T	44.00	807.2	136.3	2094.6	5.0	2.6	15.4	12.94	16.59	.438	10.00	.594	7.87
18X 8X .438/.656T	44.64	904.4	144.5	2496.8	5.4	2.8	17.3	13.13	18.66	.438	8.00	.656	8.78
16X11X .438/.594T	46.00	825.1	145.8	2226.2	5.1	2.7	15.3	13.53	16.59	.438	11.00	.594	7.87
18X 10X .438/.656T	46.10	827.8	146.2	2284.0	5.1	2.7	15.3	13.56	16.66	.438	10.00	.656	7.90
18X 9X .438/.656T	46.95	928.6	156.5	2684.0	5.6	2.9	17.1	13.78	18.66	.438	9.00	.656	8.78
18X10X .438/.594T	46.95	928.3	157.4	2686.8	5.6	2.9	17.1	13.81	18.59	.438	10.00	.594	8.74
16X10X .438/.719T	48.25	847.3	156.4	2389.1	5.3	2.8	15.3	14.19	16.72	.438	10.00	.719	7.93
18X11X .438/.656T	48.35	846.3	157.0	2388.1	5.3	2.8	15.2	14.22	16.66	.438	11.00	.656	7.90
18X10X .438/.656T	49.10	950.1	168.8	2545.0	5.4	3.0	17.0	14.44	18.66	.438	10.00	.656	8.78
16X11X .438/.719T	50.69	865.1	168.0	2545.0	5.4	2.9	15.2	14.91	16.72	.438	11.00	.719	7.93
18X11X .438/.656T	51.31	969.7	180.4	3047.9	5.9	3.1	16.9	15.09	18.66	.438	11.00	.656	8.78
21X 8X .500/.625T	52.70	1075.3	179.6	3339.9	6.4	3.3	19.7	15.50	21.63	.500	8.00	.625	11.50
18X12X .438/.656T	53.55	987.4	192.4	3226.0	6.1	3.3	16.8	15.75	18.66	.438	12.00	.656	8.78
21X 8X .500/.688T	54.40	1096.7	189.9	3333.8	6.5	3.4	19.7	16.00	21.69	.500	8.00	.688	11.53
21X 8X .500/.750T	56.10	1116.4	200.1	3923.7	6.7	3.5	19.6	16.50	21.75	.500	10.00	.750	11.56
21X10X .500/.625T	56.95	1122.4	205.8	4000.9	6.7	3.6	19.4	16.75	21.63	.500	10.00	.625	11.50
21X 9X .500/.750T	58.65	1142.5	216.1	4202.7	6.9	3.7	19.4	17.25	21.75	.500	9.00	.750	11.56

1.3750 - 1 3/8 in.



1.375 IN. PLATE (AREA= 71.84 SQ. IN.)

NOMINAL SIZE	WT/LT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL							WEB THICK	WIDTH	FLANGE THICK	
21X11X .500/ .625I	59.09	1143.4	219.2	4231.2	6.9	3.7	19.3	17.38	21.63	.500	11.00	.625	11.50
21X 8X .500/ .875I	59.50	1153.5	220.8	4310.5	6.9	3.7	19.5	17.50	21.88	.500	8.00	.875	11.63
21X10X .500/ .750I	61.20	1165.3	231.0	4470.7	7.1	3.8	19.3	18.00	21.75	.500	10.00	.750	11.56
21X11X .500/ .688I	61.40	1165.7	233.3	4484.3	7.1	3.8	19.2	18.06	21.69	.500	11.00	.688	11.53
21X13X .500/ .688I	66.10	1202.5	262.5	4969.4	7.4	4.1	18.9	19.44	21.69	.500	13.00	.688	11.53
21X12X .500/ .750I	66.30	1205.4	263.4	4999.5	7.4	4.1	19.0	19.50	21.75	.500	12.00	.750	11.56
21X11X .500/ .875I	68.44	1223.3	276.8	5236.7	7.5	4.3	19.0	20.13	21.88	.500	11.00	.875	11.63
24X 9X .625/ .750I	73.95	1326.1	278.1	6005.1	8.0	4.5	21.6	21.75	24.75	.625	9.00	.750	16.33
24X10X .625/ .750I	76.50	1350.1	296.1	6343.4	8.2	4.7	21.4	22.50	24.75	.625	10.00	.750	16.33
24X11X .625/ .750I	79.05	1371.5	313.7	6669.6	8.4	4.9	21.3	23.25	24.75	.625	11.00	.750	16.33
24X10X .625/ .875I	80.75	1388.0	324.7	6908.8	8.5	5.0	21.3	23.75	24.88	.625	10.00	.875	16.41
24X 9X .625/1.125I	85.44	1428.2	355.8	7550.4	8.8	5.3	21.2	25.13	25.13	.625	9.00	1.125	16.57
24X13X .625/ .875I	89.69	1448.6	386.9	8017.5	9.0	5.5	20.7	26.38	24.88	.625	13.00	.875	16.41
24X14X .625/ .875I	92.65	1465.8	407.7	8375.2	9.2	5.7	20.5	27.25	24.88	.625	14.00	.875	16.41
24X11X .625/1.125I	93.09	1475.2	409.2	8490.9	9.3	5.8	20.7	27.38	25.13	.625	11.00	1.125	16.57
24X12X .625/1.125I	96.90	1495.1	435.7	8942.0	9.4	6.0	20.5	28.50	25.13	.625	12.00	1.125	16.57
27X 9X .688/1.125I	97.55	1617.8	426.2	9952.4	9.9	6.2	23.4	28.69	28.13	.688	9.00	1.125	28.30
24X16X .625/ .875I	98.60	1495.9	449.0	9067.5	9.5	6.1	20.2	29.00	24.88	.625	16.00	.875	16.41
27X12X .688/ .875I	98.80	1621.2	438.2	10091.7	10.0	6.2	23.0	29.06	27.88	.688	12.00	.875	28.13
27X13X .688/ .875I	101.80	1641.1	461.4	10535.4	10.2	6.4	22.8	29.94	28.13	.688	13.00	.875	28.13
27X11X .688/1.125I	105.20	1668.7	485.8	11102.0	10.4	6.7	22.9	30.94	28.13	.688	11.00	1.125	28.30
30X13X .750/ .875I	115.19	1834.1	543.6	13525.5	11.3	7.4	24.9	33.88	30.88	.750	13.00	.875	24.19
27X14X .688/1.125I	116.65	1728.2	574.1	12715.4	10.9	7.4	22.1	34.31	28.13	.688	14.00	1.125	20.30
30X11X .750/1.125I	118.53	1863.1	570.4	14194.2	11.5	7.6	24.9	34.08	31.13	.750	11.00	1.125	24.38
27X15X .688/1.125I	120.50	1745.4	604.2	13243.1	11.1	7.6	21.9	35.44	28.13	.688	15.00	1.125	20.30
30X12X .750/1.125I	122.40	1887.0	603.2	14858.1	11.7	7.9	24.6	36.00	31.13	.750	12.00	1.125	24.38
30X16X .750/ .875I	124.10	1889.9	619.9	15056.6	11.8	8.0	24.3	36.50	30.88	.750	16.00	.875	24.19
27X16X .688/1.125I	124.30	1760.5	633.4	13743.1	11.3	7.8	21.7	36.56	28.13	.688	16.00	1.125	20.30
30X14X .750/1.125I	130.05	1928.6	668.3	16132.6	12.1	8.4	24.1	38.25	31.13	.750	14.00	1.125	24.38
30X10X .875/1.375I	136.00	1898.7	636.7	15617.9	11.8	8.2	24.5	40.00	31.38	.875	10.00	1.375	28.66
33X12X .875/1.125I	144.09	2087.4	717.6	18959.2	12.9	9.1	26.4	42.38	34.13	.875	12.00	1.125	31.07
33X10X .875/1.375I	144.94	2098.7	721.9	19205.3	13.0	9.2	26.6	42.63	34.38	.875	10.00	1.375	31.29
36X10X .875/1.125I	145.35	2231.9	728.9	21157.3	13.6	9.5	29.0	42.75	37.13	.875	10.00	1.125	33.69
33X11X .875/1.375I	149.60	2127.2	765.3	20124.2	13.2	9.5	26.3	44.00	34.38	.875	11.00	1.375	31.29
33X14X .875/1.125I	151.74	2132.2	787.9	20427.0	13.2	9.6	25.9	44.63	34.13	.875	14.00	1.125	31.07
36X10X .875/1.500I	158.10	2331.3	852.3	24263.0	14.3	10.4	28.5	46.50	37.50	.875	10.00	1.500	34.02
36X14X .875/1.375I	172.55	2408.0	998.4	27351.3	14.9	11.4	27.4	50.75	37.38	.875	14.00	1.375	33.91
36X15X .875/1.500I	183.60	2461.3	1106.6	29677.0	15.4	12.1	26.8	54.00	37.50	.875	15.00	1.500	34.02

1.3750 - 1 3/8 in.

1.500 IN. PLATE (AREA= 85.50 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			R	Y <sub>P</sub>	V <sub>F</sub>	***** BEAM DIMENSIONS *****				SHEAR AREA	
WT/FT	Z <sub>PL</sub>	Z <sub>FL</sub>	INERTIA	AREA				DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK		
3X 2X .125/.100T	2.55	30.6	6.1	23.7	.5	.8	3.9	.75	3.19	.125	2.00	.188	.59
4X 2X .125/.100T	2.99	37.1	6.0	29.2	.6	.8	4.9	.88	4.19	.125	2.00	.188	.71
3X 3X .125/.100T	3.20	33.8	6.8	26.5	.6	.8	3.9	.94	3.19	.125	3.00	.188	.59
5X 2X .125/.100T	3.40	45.7	6.2	36.5	.6	.8	5.9	1.00	5.19	.125	2.00	.188	.84
4X 3X .125/.100T	3.60	41.9	6.8	33.4	.6	.8	4.9	1.06	4.19	.125	3.00	.188	.71
5X 3X .125/.100T	4.05	52.8	7.3	42.9	.7	.8	5.9	1.19	5.19	.125	3.00	.188	.84
4X 4X 2X .100/.313T	4.69	46.4	7.5	37.5	.7	.8	5.0	1.38	4.31	.188	2.00	.313	1.09
3X 3X .100/.313T	5.10	41.4	8.3	33.4	.6	.8	4.0	1.50	3.31	.188	3.00	.313	.98
5X 2X .100/.313T	5.30	59.3	8.2	49.1	.8	.8	6.0	1.56	5.31	.188	2.00	.313	1.28
6X 2X .100/.313T	5.95	75.8	9.2	64.3	.9	.8	7.0	1.75	6.31	.188	2.00	.313	1.47
7X 2X .100/.250T	6.15	87.3	9.5	75.0	.9	.9	7.9	1.81	7.25	.188	2.00	.250	1.65
5X 3X .100/.313T	6.39	70.6	10.1	59.9	.8	.8	6.0	1.88	5.31	.188	3.00	.313	1.27
5X 4X .100/.250T	6.60	72.1	10.4	61.5	.8	.9	5.9	1.94	5.25	.188	4.00	.250	1.65
7X 3X .100/.250T	7.00	102.2	11.4	90.0	1.0	.9	7.9	2.06	7.25	.188	3.00	.250	1.65
6X 4X .100/.313T	7.24	92.7	11.8	81.3	1.0	.9	6.3	2.13	6.25	.188	4.00	.250	1.46
5X 4X .100/.313T	7.45	80.9	11.8	70.3	.9	.9	5.9	2.19	5.31	.188	4.00	.313	1.28
7X 3X .100/.313T	7.65	113.3	12.9	101.7	1.1	.9	7.9	2.25	7.31	.188	3.00	.313	1.66
7X 4X .100/.250T	7.85	116.3	13.4	105.0	1.1	.9	7.8	2.31	7.25	.188	4.00	.250	1.65
6X 4X .100/.313T	8.09	103.8	13.5	93.1	1.0	.9	6.9	2.38	6.31	.188	4.00	.313	1.47
7X 4X .100/.313T	8.70	130.0	15.3	120.3	1.2	.9	7.9	2.56	7.31	.188	4.00	.313	1.66
6X 5X .100/.313T	9.15	116.7	15.6	107.4	1.1	.9	6.9	2.69	6.31	.188	5.00	.313	1.47
6X 3X .250/.438T	9.55	112.1	14.6	102.8	1.1	.9	7.0	2.81	6.44	.250	3.00	.438	1.99
7X 5X .100/.313T	9.79	146.2	17.7	139.4	1.3	1.0	7.9	2.88	7.31	.188	5.00	.313	1.66
10.20	119.0	15.9	110.8	1.1	.9	6.9	3.00	3.00	6.38	.250	4.00	.375	1.97
10.40	141.1	16.8	134.3	1.2	1.0	8.0	3.06	3.06	7.44	.250	3.00	.438	2.24
10.64	162.4	17.7	157.7	1.3	1.0	8.9	3.13	3.13	8.38	.250	3.00	.375	2.47
10.85	182.5	18.4	180.3	1.4	1.0	9.6	3.19	3.19	9.31	.250	3.00	.313	2.70
11.05	169.2	18.8	166.3	1.4	1.0	8.8	3.25	3.25	8.31	.250	4.00	.313	2.45
11.25	174.0	19.2	172.2	1.4	1.0	9.0	3.31	3.31	8.44	.250	3.00	.438	2.49
11.49	196.8	20.1	198.5	1.5	1.0	9.9	3.38	3.38	9.38	.250	3.00	.375	2.72
11.70	218.7	20.8	224.6	1.6	1.0	10.8	3.44	3.44	10.31	.250	3.00	.313	2.95
11.90	184.2	20.9	185.5	1.4	1.0	8.9	3.50	3.50	8.38	.250	4.00	.375	2.47
12.10	210.5	21.9	216.7	1.6	1.0	9.9	3.56	3.56	9.44	.250	3.00	.438	2.74
12.34	234.7	22.7	246.4	1.7	1.0	10.8	3.63	3.63	10.38	.250	3.00	.375	2.97
12.75	243.9	24.1	259.5	1.7	1.1	10.7	3.75	3.75	10.31	.250	4.00	.313	2.95
12.95	225.7	24.4	238.2	1.6	1.1	9.8	3.81	3.81	9.31	.250	5.00	.313	2.70
13.19	205.2	24.3	218.3	1.5	1.0	8.8	3.88	3.88	8.38	.250	5.00	.375	2.47
13.60	263.9	26.8	288.7	1.8	1.1	10.8	4.00	4.00	10.38	.250	4.00	.375	2.97
13.80	267.2	27.5	294.0	1.8	1.1	10.7	4.06	4.06	10.31	.250	5.00	.313	2.95
14.04	246.1	27.4	288.3	1.7	1.1	9.8	4.13	4.13	9.38	.250	5.00	.375	2.72
14.25	221.7	26.9	288.3	1.6	1.1	8.9	4.19	4.19	8.44	.250	5.00	.438	2.49
14.45	282.6	29.4	317.6	1.9	1.1	10.8	4.25	4.25	10.44	.250	4.00	.438	2.99
14.89	290.2	30.8	330.4	1.9	1.1	10.7	4.38	4.38	10.38	.250	5.00	.375	2.97
15.10	265.5	30.4	298.4	1.8	1.1	9.8	4.44	4.44	9.44	.250	5.00	.438	2.74
15.30	267.6	31.0	302.2	1.8	1.1	9.8	4.50	4.50	9.38	.250	6.00	.375	2.74

1.5000 - 1 1/2 in.



1.500 IN. PLATE (AREA= 85.50 SQ. IN.)

NOMINAL SIZE				SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
WT/FT				ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE		THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	TH

1.5000 - 1 1/2 in.

1.500 IN. PLATE (AREA= 65.50 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA					MEB	THICK	WIDTH	FLANGE THICK
14X 8X .375/.594T	34.00	707.5	96.1	1361.8	3.8	1.9	14.2	10.00	.375	8.00	.594	6.03
14X 9X .375/.531T	34.10	706.9	96.6	1362.1	3.8	1.9	14.1	10.03	.375	9.00	.531	6.01
16X 6X .438/.531T	34.65	759.1	92.5	1486.0	3.9	2.0	16.1	10.19	.438	6.00	.531	7.90
16X 5X .438/.656T	34.95	767.3	93.6	1515.1	4.0	2.0	16.2	10.28	.438	5.00	.656	7.95
12X10X .375/.594T	35.50	621.4	95.3	1164.5	3.5	1.9	12.2	10.44	.375	10.00	.594	5.28
14X 8X .375/.656T	35.70	730.9	103.1	1460.4	3.9	2.0	14.2	10.50	.375	8.00	.656	6.06
16X 6X .438/.594T	35.90	730.2	98.4	1581.9	4.1	2.0	16.1	10.56	.438	6.00	.594	7.92
14X10X .375/.531T	35.90	730.2	104.3	1462.8	3.9	2.0	14.0	10.56	.375	10.00	.531	6.01
16X 5X .438/.719T	36.01	787.8	99.6	1597.2	4.1	2.0	16.2	10.59	.438	5.00	.719	7.98
14X 9X .375/.594T	36.01	733.4	104.7	1474.0	3.9	2.0	14.1	10.59	.375	9.00	.594	6.03
16X 6X .438/.656T	37.20	806.3	104.5	1679.4	4.2	2.1	16.1	10.94	.438	6.00	.656	7.95
18X 6X .438/.531T	37.60	890.3	108.3	1934.2	4.5	2.2	17.9	11.06	.438	6.00	.531	8.77
18X 5X .438/.656T	37.94	898.8	109.7	1970.3	4.5	2.2	18.0	11.16	.438	5.00	.656	8.83
14X10X .375/.594T	38.05	757.3	113.4	1586.4	4.1	2.1	14.0	11.19	.375	10.00	.594	6.03
16X 6X .438/.719T	38.45	829.0	110.5	1776.1	4.3	2.1	16.1	11.31	.438	6.00	.719	7.98
18X 6X .438/.594T	38.90	916.4	115.2	2055.4	4.6	2.2	17.8	11.44	.438	6.00	.594	8.80
18X 5X .438/.719T	39.00	920.5	115.3	2071.1	4.6	2.2	18.0	11.47	.438	5.00	.719	8.86
16X 8X .438/.594T	39.95	846.7	117.9	1872.8	4.4	2.2	15.9	11.75	.438	8.00	.594	7.92
16X 9X .438/.531T	40.05	846.6	118.6	1875.4	4.4	2.2	15.8	11.78	.438	9.00	.531	7.90
14X11X .375/.594T	40.05	779.5	122.1	1698.6	4.2	2.2	13.9	11.78	.375	11.00	.594	6.03
18X 7X .438/.594T	40.90	951.8	126.0	2235.3	4.8	2.3	17.7	12.03	.438	7.00	.594	8.80
18X 8X .438/.531T	41.24	956.0	128.0	2261.0	4.8	2.4	17.7	12.13	.438	8.00	.531	8.77
18X 6X .438/.719T	41.45	963.4	128.5	2292.7	4.8	2.4	17.8	12.19	.438	6.00	.719	8.86
16X10X .438/.531T	41.85	871.6	127.5	2005.1	4.5	2.3	15.7	12.31	.438	10.00	.531	7.90
16X 9X .438/.594T	41.96	874.2	127.7	2016.2	4.5	2.3	15.8	12.34	.438	9.00	.594	7.92
18X 7X .438/.656T	42.40	974.0	133.4	2365.7	4.9	2.4	17.7	12.47	.438	7.00	.656	8.83
14X11X .375/.531T	42.40	803.9	131.8	1829.7	4.3	2.3	13.9	12.47	.375	11.00	.531	6.06
18X 9X .438/.531T	43.04	984.3	137.7	2420.2	5.0	2.5	17.6	12.66	.438	9.00	.531	8.77
16X10X .438/.594T	44.00	899.5	137.7	2159.7	4.7	2.4	15.7	12.94	.438	10.00	.594	7.92
18X 8X .438/.656T	44.64	1010.5	146.0	2571.2	5.1	2.5	17.6	13.13	.438	8.00	.656	8.83
16X11X .438/.594T	46.00	921.8	147.3	2297.1	4.8	2.5	15.6	13.53	.438	11.00	.594	7.92
16X10X .438/.656T	46.10	925.1	147.6	2312.1	4.8	2.5	15.7	13.56	.438	10.00	.656	7.95
18X 9X .438/.656T	46.85	1040.5	158.1	2766.2	5.3	2.7	17.5	13.78	.438	9.00	.656	8.83
18X10X .438/.594T	46.95	1040.3	158.9	2769.3	5.3	2.7	17.4	13.81	.438	10.00	.594	8.80
16X10X .438/.719T	48.25	949.3	157.9	2467.1	5.0	2.6	15.6	14.19	.438	10.00	.719	7.98
16X11X .438/.656T	48.35	948.2	158.5	2466.3	5.0	2.6	15.6	14.22	.438	11.00	.656	7.95
18X10X .438/.656T	49.10	1067.4	170.1	2958.2	5.4	2.8	17.4	14.44	.438	10.00	.656	8.83
16X11X .438/.719T	50.69	971.7	169.6	2630.6	5.1	2.7	15.5	14.91	.438	11.00	.719	7.98
18X11X .438/.656T	51.31	1091.9	182.1	3146.6	5.6	2.9	17.3	15.09	.438	11.00	.656	8.83
21X 8X .500/.625T	52.70	1211.4	194.1	3648.9	6.0	3.0	20.1	15.50	.500	8.00	.625	11.57
18X12X .438/.656T	53.55	1114.2	194.1	3333.3	5.7	3.0	17.2	15.75	.438	12.00	.656	8.83
21X 8X .500/.688T	54.40	1237.7	191.8	3851.0	6.2	3.1	20.1	16.00	.500	8.00	.688	11.60
21X 8X .500/.750T	56.10	1261.9	202.0	4049.2	6.3	3.2	20.0	16.50	.500	8.00	.750	11.63
21X10X .500/.625T	56.95	1269.5	207.8	4130.3	6.4	3.3	19.9	16.75	.500	10.00	.625	11.57
21X 9X .500/.750T	58.65	1294.4	218.2	4341.1	6.5	3.4	19.9	17.25	.500	9.00	.750	11.63

1.5000 - 1 1/2 in.



1.500 IN. PLATE (AREA= 85.50 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
	WT/FT	ZPL	ZFL						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21x11x .500/.625T	59.09	1295.8	221.3	6.5	3.4	19.8	17.38	21.63	.500	11.00	.625	11.57
21x 8x .500/.875T	59.50	1307.8	223.0	6.6	3.4	20.0	17.50	21.88	.500	8.00	.875	11.69
21x10x .500/.750T	61.20	1322.8	234.0	6.7	3.5	19.8	18.00	21.75	.500	10.00	.750	11.63
21x11x .500/.688T	61.40	1323.4	235.5	6.7	3.5	19.7	18.06	21.69	.500	11.00	.688	11.60
21x11x13x .500/.688T	66.10	1369.5	264.9	7.0	3.8	19.4	19.44	21.69	.500	13.00	.688	11.60
21x11x12x .500/.750T	66.30	1373.1	265.9	7.0	3.8	19.5	19.50	21.75	.500	12.00	.750	11.63
21x11x11x .500/.875T	68.44	1395.3	278.5	7.2	3.9	19.5	20.13	21.88	.500	11.00	.875	11.69
24x 9x .625/.750T	73.95	1512.1	281.1	7.6	4.1	22.1	21.75	24.75	.625	9.00	.750	16.41
24x10x .625/.750T	76.50	1541.6	299.2	7.8	4.3	22.0	22.50	24.75	.625	10.00	.750	16.41
24x11x .625/.750T	79.05	1568.0	317.0	8.0	4.4	21.8	23.25	24.75	.625	11.00	.750	16.41
24x10x .625/.875T	80.75	1588.0	328.1	8.1	4.5	21.9	23.75	24.88	.625	10.00	.875	16.49
24x 9x .625/1.125T	85.44	1637.2	359.6	8.4	4.8	21.8	25.13	25.13	.625	9.00	1.125	16.64
24x13x .625/.875T	89.69	1663.2	390.9	8.6	5.0	21.4	26.38	24.88	.625	13.00	.875	16.49
24x14x .625/.875T	92.65	1684.6	411.9	8.8	5.2	21.2	27.25	24.88	.625	14.00	.875	16.49
24x11x .625/1.125T	93.09	1695.6	413.4	8.9	5.2	21.4	27.38	25.13	.625	11.00	1.125	16.64
24x12x .625/1.125T	96.90	1720.5	440.2	9.0	5.4	21.2	28.50	25.13	.625	12.00	1.125	16.64
27x 9x .688/1.125T	97.55	1859.2	431.0	9.5	5.6	24.1	28.69	28.13	.688	9.00	1.125	20.39
24x16x .625/.875T	98.60	1722.2	453.5	9.1	5.5	20.9	29.00	24.88	.625	16.00	.875	16.49
27x12x .688/.875T	98.80	1863.7	443.1	9.6	5.6	23.7	29.06	27.88	.688	12.00	.875	20.21
27x13x .688/.875T	101.80	1888.2	466.5	9.8	5.8	23.6	29.94	27.88	.688	13.00	.875	20.21
27x11x .688/1.125T	105.20	1921.6	491.2	10.0	6.0	23.6	30.94	28.13	.688	11.00	1.125	20.39
30x13x .750/.875T	115.19	2112.8	550.2	10.9	6.7	25.7	33.88	30.88	.750	13.00	.875	24.29
27x14x .688/1.125T	116.65	1994.9	580.4	10.5	6.7	23.0	34.31	28.13	.688	14.00	1.125	20.39
30x11x .750/1.125T	118.59	2147.6	577.3	11.1	6.9	25.7	34.88	31.13	.750	11.00	1.125	24.47
27x15x .688/1.125T	120.50	2016.2	610.8	10.7	6.9	22.7	35.44	28.13	.688	15.00	1.125	20.39
30x12x .750/1.125T	122.40	2176.7	610.5	11.3	7.1	25.5	36.00	31.13	.750	12.00	1.125	24.47
30x16x .750/.875T	124.10	2180.7	627.2	11.4	7.2	25.1	36.50	30.88	.750	16.00	.875	24.29
27x16x .688/1.125T	124.30	2035.0	640.2	10.9	7.1	22.5	36.56	28.13	.688	16.00	1.125	20.39
30x14x .750/1.125T	130.05	2227.3	676.2	11.7	7.6	25.0	38.25	31.13	.750	14.00	1.125	24.47
30x10x .875/1.375T	136.00	2188.4	645.3	11.4	7.5	25.4	40.00	31.38	.875	10.00	1.375	28.77
33x12x .875/1.125T	144.09	2406.9	727.5	12.5	8.3	27.4	42.38	34.13	.875	12.00	1.125	31.18
33x10x .875/1.375T	144.94	2420.1	732.0	12.5	8.3	27.5	42.63	34.38	.875	10.00	1.375	31.40
36x10x .875/1.125T	145.35	2572.2	739.6	13.2	8.6	30.0	42.75	37.13	.875	10.00	1.125	33.80
33x11x .875/1.375T	149.68	2454.2	775.9	12.8	8.6	27.3	44.00	34.38	.875	11.00	1.375	31.40
33x14x .875/1.125T	151.74	2460.7	796.7	12.8	8.7	26.9	44.63	34.13	.875	14.00	1.125	31.18
36x10x .875/1.500T	158.10	2609.9	864.6	13.9	9.5	29.5	46.50	37.50	.875	10.00	1.500	34.13
36x14x .875/1.375T	172.55	2761.5	1012.4	14.6	10.4	28.5	50.75	37.38	.875	14.00	1.375	34.02
36x15x .875/1.500T	183.60	2845.0	1122.1	15.0	11.0	28.0	54.00	37.50	.875	15.00	1.500	34.13

1.5000 - 1 1/2 in.

1.750 IN. PLATE (AREA=116.38 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL						WEB THICK	FLANGE WIDTH THICK	
3X 2X .125/ .180T	2.55	42.5	9.4	.6	.9	4.0	.75	3.19	.125	2.00	.188
4X 2X .125/ .180T	2.99	48.4	8.7	.6	.9	5.0	.88	4.19	.125	2.00	.188
3X 3X .125/ .180T	3.28	45.4	10.1	.6	.9	4.0	.94	3.19	.125	3.00	.188
5X 2X .125/ .180T	3.40	56.3	8.5	.7	.9	6.0	1.00	5.19	.125	2.00	.188
4X 3X .125/ .180T	3.60	52.9	9.6	.6	.9	5.0	1.06	4.19	.125	3.00	.188
5X 3X .125/ .180T	4.05	62.9	9.6	.7	.9	6.0	1.19	5.19	.125	3.00	.188
4X 2X .188/ .313T	4.69	57.1	10.2	.7	.9	5.1	1.38	4.31	.188	2.00	.313
3X 3X .188/ .313T	5.18	52.7	11.7	.6	.9	4.1	1.50	3.31	.188	3.00	.313
5X 2X .188/ .313T	5.30	69.2	10.5	.7	.9	6.1	1.56	5.31	.188	2.00	.313
6X 2X .188/ .313T	5.95	84.6	11.3	.8	.9	7.1	1.75	6.31	.188	2.00	.313
7X 2X .188/ .313T	6.15	95.4	11.4	.9	1.0	8.0	1.81	7.25	.188	2.00	.250
5X 3X .188/ .313T	6.39	80.8	12.4	.8	.9	6.1	1.88	5.31	.188	3.00	.313
6X 3X .188/ .313T	6.60	81.5	12.8	.8	1.0	6.0	1.94	5.25	.188	4.00	.250
7X 3X .188/ .313T	7.38	109.8	13.3	1.0	1.0	8.0	2.06	7.25	.188	3.00	.250
6X 4X .188/ .313T	7.24	101.0	14.0	.9	1.0	7.0	2.13	6.25	.188	4.00	.250
5X 4X .188/ .313T	7.45	90.0	14.3	.9	1.0	6.1	2.19	5.31	.188	4.00	.313
7X 3X .188/ .313T	7.65	120.7	14.8	1.0	1.0	8.1	2.25	7.31	.188	3.00	.313
7X 4X .188/ .313T	7.85	123.7	15.3	1.0	1.0	8.0	2.31	7.25	.188	4.00	.250
6X 4X .188/ .313T	8.09	112.0	15.6	1.0	1.0	7.1	2.38	6.31	.188	4.00	.313
7X 4X .188/ .313T	8.70	137.5	17.2	1.1	1.0	8.1	2.56	7.31	.188	4.00	.313
6X 5X .188/ .313T	9.15	125.0	17.8	1.0	1.0	7.1	2.69	6.31	.188	5.00	.313
7X 5X .188/ .313T	9.55	154.0	19.7	1.2	1.0	8.2	2.81	6.44	.250	5.00	.438
6X 3X .250/ .438T	9.79	120.6	16.8	1.0	1.0	7.1	3.00	6.38	.250	4.00	.375
7X 3X .250/ .438T	10.40	149.1	18.8	1.2	1.0	8.2	3.06	7.44	.250	3.00	.375
8X 3X .250/ .438T	10.64	170.1	19.5	1.2	1.0	9.1	3.13	8.38	.250	3.00	.375
9X 3X .250/ .438T	10.85	190.0	20.0	1.3	1.1	10.0	3.19	9.31	.250	3.00	.313
8X 4X .250/ .438T	11.05	177.2	20.7	1.2	1.1	9.0	3.25	8.31	.250	4.00	.313
9X 4X .250/ .438T	11.25	182.2	21.1	1.3	1.1	9.1	3.31	8.44	.250	3.00	.438
10X 3X .250/ .438T	11.49	204.9	21.8	1.4	1.1	10.1	3.38	9.38	.250	3.00	.375
11X 3X .250/ .438T	11.70	226.9	22.4	1.4	1.1	11.0	3.44	10.31	.250	3.00	.313
12X 3X .250/ .438T	11.90	192.9	22.8	1.3	1.1	9.1	3.50	8.38	.250	4.00	.375
9X 3X .250/ .438T	12.10	219.4	23.6	1.4	1.1	10.1	3.56	9.44	.250	3.00	.438
10X 3X .250/ .438T	12.34	243.9	24.4	1.5	1.1	11.0	3.63	10.38	.250	3.00	.375
10X 4X .250/ .438T	12.75	253.8	25.8	1.5	1.1	10.9	3.75	10.31	.250	4.00	.313
9X 5X .250/ .438T	12.95	235.7	26.2	1.5	1.1	10.0	3.81	9.31	.250	5.00	.375
8X 5X .250/ .438T	13.19	215.4	26.2	1.4	1.1	9.0	3.88	8.38	.250	5.00	.375
10X 4X .250/ .438T	13.60	275.4	28.4	1.6	1.1	11.0	4.00	10.38	.250	4.00	.375
10X 5X .250/ .438T	13.80	279.1	29.1	1.6	1.1	10.9	4.06	10.31	.250	5.00	.313
9X 5X .250/ .438T	14.04	257.9	29.2	1.6	1.1	10.0	4.13	9.38	.250	5.00	.375
8X 5X .250/ .438T	14.25	233.2	28.8	1.5	1.1	9.1	4.19	8.44	.250	5.00	.438
10X 4X .250/ .438T	14.45	286.0	31.1	1.7	1.2	11.0	4.25	10.44	.250	4.00	.438
10X 5X .250/ .438T	14.89	304.6	32.5	1.7	1.2	11.0	4.38	10.38	.250	5.00	.375
9X 5X .250/ .438T	15.10	279.3	32.2	1.6	1.2	10.0	4.44	9.44	.250	5.00	.438
9X 6X .250/ .438T	15.30	281.8	32.9	1.6	1.2	10.0	4.50	9.38	.250	6.00	.375

1.7500 - 1 3/4 in.



1.750 IN. PLATE (AREA=116.38 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK										
8X 6X	.250/ .438T	15.74	256.4	32.7	295.6	1.6	1.2	9.0	4.63	8.44	.250	6.00	.438										
10X 5X	.250/ .438T	15.95	329.1	35.8	394.0	1.8	1.2	11.0	4.69	10.44	.250	5.00	.438										
10X 6X	.250/ .375T	16.15	332.4	36.6	399.5	1.8	1.2	10.9	4.75	10.38	.250	6.00	.375										
9X 7X	.250/ .375T	16.59	304.7	36.6	363.4	1.7	1.2	9.9	4.88	9.38	.250	7.00	.375										
8X 7X	.250/ .438T	17.28	278.0	36.6	329.2	1.6	1.2	9.0	5.06	8.44	.250	7.00	.438										
10X 7X	.250/ .375T	17.44	358.5	40.7	442.9	1.9	1.2	10.9	5.13	10.38	.250	7.00	.375										
9X 7X	.250/ .438T	18.05	331.0	40.8	406.6	1.8	1.2	10.0	5.31	9.44	.250	7.00	.438										
10X 4X	.313/ .563T	18.29	347.7	38.7	428.4	1.9	1.2	11.1	5.38	10.56	.313	4.00	.563										
12X 4X	.313/ .406T	18.29	406.2	39.7	512.6	2.1	1.3	12.9	5.38	12.41	.313	4.00	.406										
8X 8X	.250/ .438T	18.70	298.4	40.4	382.9	1.7	1.2	9.0	5.50	8.44	.250	8.00	.438										
10X 7X	.250/ .438T	18.90	387.8	45.2	493.9	2.0	1.3	10.9	5.56	10.44	.250	7.00	.438										
12X 4X	.313/ .469T	19.14	430.0	42.8	553.9	2.1	1.3	12.9	5.63	12.47	.313	4.00	.469										
9X 8X	.250/ .438T	19.55	354.6	45.1	447.9	1.9	1.3	9.9	5.75	9.44	.250	8.00	.438										
12X 5X	.313/ .406T	19.65	442.6	44.9	576.9	2.2	1.3	12.9	5.78	12.41	.313	5.00	.406										
12X 4X	.313/ .531T	19.99	453.4	46.0	596.1	2.2	1.3	13.0	5.88	12.53	.313	4.00	.531										
10X 8X	.250/ .438T	20.40	414.4	50.8	543.8	2.1	1.3	10.9	6.00	10.44	.250	8.00	.438										
12X 6X	.313/ .406T	20.71	470.5	48.8	628.6	2.3	1.3	12.9	6.09	12.47	.313	5.00	.406										
12X 5X	.313/ .531T	21.05	476.9	50.1	641.6	2.3	1.3	12.8	6.19	12.41	.313	6.00	.531										
12X 5X	.313/ .531T	21.79	497.4	52.8	681.2	2.4	1.4	12.9	6.41	12.53	.313	5.00	.531										
12X 6X	.313/ .469T	22.30	507.8	54.8	703.8	2.4	1.4	12.8	6.56	12.47	.313	6.00	.469										
12X 6X	.313/ .531T	22.41	509.3	55.3	706.4	2.4	1.4	12.8	6.59	12.41	.313	7.00	.406										
12X 7X	.313/ .469T	23.60	537.7	59.6	755.6	2.5	1.4	12.9	6.94	12.53	.313	6.00	.469										
12X 7X	.313/ .469T	23.90	542.8	60.8	777.6	2.5	1.4	12.8	7.03	12.47	.313	7.00	.469										
14X 4X	.375/ .469T	24.24	576.5	56.1	829.7	2.6	1.4	14.8	7.13	14.47	.375	4.00	.469										
14X 4X	.375/ .531T	25.09	602.0	59.7	884.5	2.7	1.5	14.8	7.38	14.53	.375	4.00	.531										
12X 7X	.313/ .531T	25.40	574.7	66.3	849.3	2.6	1.5	12.8	7.47	12.53	.313	7.00	.531										
12X 8X	.313/ .469T	25.50	575.3	66.8	851.5	2.6	1.5	12.7	7.50	12.47	.313	8.00	.469										
14X 4X	.375/ .594T	25.94	626.7	63.3	939.6	2.8	1.5	14.8	7.63	14.59	.375	4.00	.594										
12X 5X	.375/ .656T	26.45	559.5	63.7	824.2	2.6	1.5	12.9	7.78	12.66	.375	5.00	.656										
14X 4X	.375/ .656T	26.79	650.5	66.8	994.8	2.8	1.5	14.9	7.88	14.66	.375	4.00	.656										
14X 5X	.375/ .531T	26.89	650.8	67.6	996.7	2.8	1.5	14.7	7.91	14.53	.375	5.00	.531										
12X 8X	.313/ .531T	27.20	609.0	73.1	932.5	2.7	1.5	12.7	8.00	12.53	.313	8.00	.531										
14X 6X	.375/ .531T	28.70	695.7	75.5	1108.6	3.0	1.6	14.7	8.44	14.53	.375	6.00	.531										
14X 5X	.375/ .656T	29.00	705.8	76.5	1133.1	3.0	1.6	14.8	8.53	14.66	.375	5.00	.656										
14X 7X	.375/ .469T	29.00	701.0	76.9	1123.5	3.0	1.6	14.6	8.53	14.47	.375	7.00	.469										
12X 9X	.313/ .531T	29.00	640.3	79.9	1014.4	2.8	1.6	12.7	8.53	12.53	.313	9.00	.531										
14X 6X	.375/ .531T	29.95	726.0	80.8	1188.3	3.1	1.6	14.7	8.81	14.59	.375	6.00	.531										
14X 7X	.375/ .531T	30.50	736.0	83.2	1217.2	3.1	1.7	14.6	8.97	14.53	.375	7.00	.531										
14X 8X	.375/ .469T	30.60	736.4	83.8	1219.8	3.1	1.7	14.6	9.00	14.47	.375	8.00	.469										
12X 10X	.313/ .531T	30.80	669.5	86.7	1095.8	3.0	1.6	12.6	9.06	12.53	.313	10.00	.531										
14X 6X	.375/ .656T	31.25	755.3	86.2	1269.8	3.2	1.7	14.7	9.19	14.66	.375	6.00	.656										
14X 7X	.375/ .594T	31.99	768.8	89.6	1310.8	3.2	1.7	14.6	9.41	14.59	.375	7.00	.594										
14X 8X	.375/ .531T	32.30	773.7	91.1	1326.5	3.2	1.7	14.6	9.50	14.53	.375	8.00	.531										
16X 5X	.438/ .531T	32.84	820.4	85.7	1418.6	3.4	1.7	16.6	9.66	16.53	.438	5.00	.531										
16X 5X	.438/ .594T	33.90	849.9	90.8	1504.6	3.5	1.8	16.6	9.97	16.59	.438	5.00	.594										

1.7500 - 1 3/4 in.

1.750 IN. PLATE (AREA=116.38 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS					FLANGE		SHEAR		
		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
14X 8X .375/	.594T	34.00	808.7	98.4	1433.6	3.4	1.8	14.6	10.00	14.59	.375	8.00	.594	6.13
14X 9X .375/	.531T	34.10	808.2	98.9	1434.1	3.4	1.8	14.5	10.03	14.53	.375	9.00	.531	6.11
16X 6X .438/	.531T	34.65	867.8	94.7	1560.4	3.5	1.8	16.5	10.19	16.53	.438	6.00	.531	8.01
16X 5X .438/	.565T	34.95	878.3	95.8	1590.9	3.5	1.8	16.6	10.28	16.66	.438	5.00	.656	8.06
12X10X .375/	.594T	35.50	710.2	97.8	1232.6	3.1	1.7	12.6	10.44	12.59	.375	10.00	.594	5.38
14X 8X .375/	.656T	35.70	840.6	105.5	1538.1	3.5	1.8	14.6	10.50	14.66	.375	8.00	.656	6.15
35.90	899.8	100.7	1661.3	3.6	1.8	16.5	10.56	16.59	.438	6.00	.594	8.03	8.15	
16X 6X .438/	.531T	35.90	840.3	106.7	1540.9	3.5	1.8	14.4	10.56	14.53	.375	10.00	.531	6.11
16X 5X .438/	.719T	36.01	905.6	100.9	1677.3	3.6	1.9	16.6	10.59	16.72	.438	5.00	.719	8.09
14X 9X .375/	.594T	36.01	844.4	107.1	1552.6	3.5	1.8	14.5	10.59	14.59	.375	9.00	.594	6.13
16X 6X .438/	.656T	37.20	930.8	106.8	1764.1	3.7	1.9	16.5	10.94	16.66	.438	6.00	.656	8.06
18X 6X .438/	.531T	37.60	1032.1	110.7	2026.7	4.0	2.0	18.3	11.06	18.53	.438	6.00	.531	8.88
18X 5X .438/	.656T	37.94	1043.3	112.0	2064.6	4.0	2.0	18.4	11.16	18.66	.438	5.00	.656	8.94
14X10X .375/	.594T	38.05	877.7	115.8	1672.2	3.6	1.9	14.4	11.19	14.59	.375	10.00	.594	6.13
16X 6X .438/	.719T	38.45	960.1	112.9	1866.2	3.8	1.9	16.5	11.31	16.72	.438	6.00	.719	8.09
18X 6X .438/	.594T	38.90	1067.3	117.6	2154.3	4.1	2.0	18.3	11.44	18.59	.438	6.00	.594	8.91
18X 5X .438/	.719T	39.00	1072.6	117.7	2170.7	4.1	2.0	18.4	11.47	18.72	.438	5.00	.719	8.97
16X 8X .438/	.594T	39.95	986.4	120.5	1963.8	3.9	2.0	16.3	11.75	16.59	.438	8.00	.594	8.83
16X 9X .438/	.531T	40.05	986.6	121.1	1971.9	3.9	2.0	16.3	11.78	16.53	.438	9.00	.531	8.01
14X11X .375/	.594T	40.05	909.0	124.1	1791.8	3.7	2.0	14.4	11.78	14.59	.375	11.00	.594	6.13
18X 7X .438/	.594T	40.90	1115.9	128.5	2341.4	4.3	2.1	18.2	12.03	18.59	.438	7.00	.594	8.91
18X 8X .438/	.531T	41.24	1122.0	130.6	2371.7	4.3	2.1	18.2	12.13	18.53	.438	8.00	.531	8.88
18X 6X .438/	.719T	41.45	1131.6	131.1	2404.8	4.3	2.1	18.3	12.19	18.72	.438	6.00	.719	8.97
16X10X .438/	.531T	41.85	1021.4	130.1	2109.7	4.0	2.1	16.2	12.31	16.53	.438	10.00	.531	8.01
16X 9X .438/	.594T	41.96	1024.8	130.4	2121.3	4.1	2.1	16.3	12.34	16.59	.438	9.00	.594	8.83
18X 7X .438/	.656T	42.40	1147.5	136.1	2482.8	4.4	2.2	18.2	12.47	18.66	.438	7.00	.656	8.94
14X11X .375/	.656T	42.40	943.6	134.5	1932.0	3.9	2.0	14.4	12.47	14.66	.375	11.00	.656	6.15
18X 9X .438/	.531T	43.84	1161.5	140.4	2540.5	4.4	2.2	18.1	12.66	18.53	.438	9.00	.531	8.80
16X10X .438/	.594T	44.00	1060.6	140.4	2274.2	4.2	2.1	16.2	12.94	16.59	.438	10.00	.594	8.83
18X 8X .438/	.656T	44.64	1197.9	148.7	2780.5	4.6	2.3	18.2	13.13	18.66	.438	8.00	.656	8.94
16X11X .438/	.594T	46.00	1092.5	150.1	2421.0	4.3	2.2	16.1	13.53	16.59	.438	11.00	.594	8.03
16X10X .438/	.656T	46.10	1096.8	150.5	2436.8	4.3	2.2	16.2	13.56	16.66	.438	10.00	.656	8.06
18X 9X .438/	.656T	46.85	1240.7	161.0	2908.2	4.7	2.3	18.1	13.78	18.66	.438	9.00	.656	8.94
16X10X .438/	.594T	46.95	1240.7	161.8	2911.7	4.7	2.3	18.0	13.81	18.59	.438	10.00	.594	8.91
16X10X .438/	.719T	48.25	1131.4	161.0	2602.7	4.5	2.3	16.2	14.19	16.72	.438	10.00	.719	8.09
16X11X .438/	.656T	48.35	1130.4	161.5	2602.0	4.5	2.3	16.1	14.22	16.66	.438	11.00	.656	8.06
18X10X .438/	.656T	49.10	1279.6	173.2	3133.4	4.9	2.4	18.0	14.44	18.66	.438	10.00	.656	8.94
16X11X .438/	.719T	50.69	1164.5	172.7	2778.5	4.6	2.4	16.1	14.51	16.72	.438	11.00	.719	8.09
18X11X .438/	.656T	51.31	1315.4	195.3	3315.2	5.0	2.5	17.9	15.09	18.66	.438	11.00	.656	8.94
20X12X .438/	.656T	52.70	1462.2	184.7	3834.1	5.4	2.6	20.8	15.50	21.63	.500	8.00	.625	11.69
21X 8X .500/	.688T	53.55	1398.3	197.5	3516.0	5.2	2.6	17.8	15.75	18.66	.438	12.00	.656	8.94
21X 8X .500/	.688T	54.40	1499.4	195.3	4049.5	5.5	2.7	20.7	16.00	21.69	.500	8.00	.688	11.72
21X 8X .500/	.750T	56.10	1533.9	205.6	4261.3	5.7	2.8	20.7	16.50	21.75	.500	8.00	.750	11.75
21X10X .500/	.625T	56.95	1545.8	211.4	4348.7	5.7	2.8	20.6	16.75	21.63	.500	10.00	.625	11.69
18X 9X .500/	.750T	58.65	1580.9	222.0	4574.3	5.9	2.9	20.6	17.25	21.75	.500	9.00	.750	11.75



1.750 IN. PLATE (AREA=116.38 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
21X11X .500/.625T	59.09	1503.8	225.1	4607.5	5.9	2.9	20.5	17.38	21.63	.500	11.00	.625	11.69
21X 8X .500/.875T	59.50	1599.8	226.8	4694.5	5.9	2.9	20.7	17.50	21.88	.500	8.00	.875	11.82
21X10X .500/.750T	61.20	1622.6	238.0	4876.8	6.0	3.0	20.5	18.00	21.75	.500	10.00	.750	11.75
21X11X .500/.688T	61.40	1623.8	239.5	4892.6	6.0	3.0	20.4	18.06	21.69	.500	11.00	.688	11.72
21X13X .500/.688T	66.10	1692.3	269.2	5444.7	6.3	3.2	20.2	19.44	21.69	.500	13.00	.688	11.72
21X12X .500/.750T	66.30	1697.2	270.2	5478.4	6.3	3.2	20.3	19.50	21.75	.500	12.00	.750	11.75
21X11X .500/.875T	68.44	1729.6	283.1	5788.8	6.5	3.3	20.3	20.13	21.88	.500	11.00	.875	11.82
24X 9X .625/.750T	73.95	1877.0	286.3	6582.8	6.9	3.5	22.9	22.50	24.75	.625	9.00	.750	16.56
24X10X .625/.750T	76.50	1919.5	304.7	6968.0	7.1	3.6	22.9	22.50	24.75	.625	10.00	.750	16.56
24X11X .625/.750T	79.05	1957.8	322.7	7311.5	7.3	3.7	22.8	23.25	24.75	.625	11.00	.750	16.56
24X10X .625/.875T	80.75	1986.4	334.0	7614.7	7.4	3.8	22.8	23.75	24.88	.625	10.00	.875	16.64
24X 9X .625/1.125T	85.44	2057.2	366.0	8352.6	7.7	4.1	22.8	25.13	25.13	.625	9.00	1.125	16.64
24X13X .625/.875T	89.69	2097.2	397.7	8902.0	7.9	4.2	22.4	26.38	24.88	.625	13.00	.875	16.64
24X14X .625/.875T	92.65	2129.1	418.9	9321.9	8.1	4.4	22.3	27.25	24.88	.625	14.00	.875	16.64
24X11X .625/1.125T	93.09	2143.8	420.6	9452.3	8.1	4.4	22.5	27.38	25.13	.625	11.00	1.125	16.88
24X12X .625/1.125T	96.90	2181.1	447.7	9985.5	8.3	4.6	22.3	28.50	25.13	.625	12.00	1.125	16.88
27X 9X .688/1.125T	97.55	2353.4	439.2	11058.3	8.7	4.7	25.2	28.69	28.13	.688	9.00	1.125	20.56
24X16X .625/.875T	98.60	2185.5	461.2	10111.5	8.4	4.6	22.0	29.00	24.88	.625	16.00	.875	16.64
27X12X .688/.875T	98.80	2361.2	451.3	11226.0	8.8	4.8	24.9	29.06	27.88	.688	12.00	.875	20.39
27X13X .688/.875T	101.80	2396.7	475.0	11746.5	9.0	4.9	24.7	29.94	27.88	.688	13.00	.875	20.39
27X11X .688/1.125T	105.20	2444.3	500.3	12408.6	9.2	5.1	24.8	30.94	28.13	.688	11.00	1.125	20.56
30X13X .750/.875T	115.13	2694.7	561.0	15151.3	10.0	5.6	27.0	33.88	30.88	.750	13.00	.875	24.47
27X14X .688/1.125T	116.65	2552.3	590.8	14335.6	9.8	5.6	24.3	34.31	28.13	.688	14.00	1.125	20.56
30X11X .750/1.125T	118.59	2743.5	588.7	15936.4	10.3	5.8	27.1	34.88	31.13	.750	11.00	1.125	24.66
27X15X .688/1.125T	120.50	2584.0	621.7	14973.5	9.9	5.8	24.1	35.44	28.13	.688	15.00	1.125	20.56
30X12X .750/1.125T	122.40	2785.3	622.4	16727.0	10.5	6.0	26.9	36.00	31.13	.750	12.00	1.125	24.66
30X16X .750/.875T	124.10	2792.3	639.3	16973.5	10.5	6.1	26.6	36.50	30.88	.750	16.00	.875	24.47
27X16X .688/1.125T	124.30	2612.0	651.6	15582.2	10.1	6.0	23.9	36.56	28.13	.688	16.00	1.125	20.56
30X14X .750/1.125T	130.05	2858.5	689.2	18259.4	10.9	6.4	26.5	38.25	31.13	.750	14.00	1.125	24.66
30X10X .875/1.375T	136.00	2800.3	659.4	17682.5	10.6	6.3	26.8	40.00	31.38	.875	10.00	1.375	28.99
33X12X .875/1.125T	144.09	3086.7	743.6	21500.6	11.6	7.0	28.9	42.38	34.13	.875	12.00	1.125	31.40
33X10X .875/1.375T	144.94	3104.2	748.4	21787.3	11.7	7.0	29.1	42.63	34.38	.875	10.00	1.375	31.61
36X10X .875/1.125T	145.35	3297.8	756.8	23932.0	12.3	7.3	31.6	42.75	37.13	.875	10.00	1.125	34.02
33X11X .875/1.375T	149.60	3152.2	733.2	22895.9	11.9	7.3	28.9	44.00	34.38	.875	11.00	1.375	31.61
33X14X .875/1.125T	151.74	3162.3	816.1	23274.7	12.0	7.4	28.5	44.53	34.13	.875	14.00	1.125	31.40
36X10X .875/1.500T	153.10	3459.9	884.5	27687.7	13.0	8.0	31.3	46.50	37.50	.875	10.00	1.500	34.34
36X14X .875/1.375T	172.55	3588.3	1035.0	31432.2	13.7	8.8	30.4	50.75	37.38	.875	14.00	1.375	34.24
36X15X .875/1.500T	183.60	3676.9	1147.0	34315.5	14.2	9.3	29.9	54.00	37.50	.875	15.00	1.500	34.34

1.7500 - 1 3/4 in.

2.000 IN. PLATE (AREA=152.00 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INFRTIA							WIDTH	THICK	
3X 2X .125/.188T	2.55	58.5	14.3	59.6	.6	1.0	4.2	.75	3.19	.125	2.00	.188	.65
4X 2X .125/.188T	2.99	64.1	12.7	65.6	.7	1.0	5.2	.98	4.19	.125	2.00	.188	.77
3X 3X .125/.188T	3.20	61.4	15.1	62.9	.6	1.0	4.2	.94	3.19	.125	3.00	.188	.65
5X 2X .125/.188T	3.40	71.3	11.9	73.4	.7	1.0	6.2	1.00	5.19	.125	2.00	.188	.90
4X 3X .125/.188T	3.60	68.3	13.6	70.2	.7	1.0	5.2	1.06	4.19	.125	3.00	.188	.77
5X 3X .125/.188T	4.05	77.5	13.1	80.4	.7	1.0	6.2	1.19	5.19	.125	3.00	.188	.90
4X 2X .188/.313T	4.69	72.3	14.2	74.9	.7	1.0	5.3	1.38	4.31	.188	2.00	.313	1.19
3X 3X .188/.313T	5.10	68.3	16.5	70.7	.7	1.0	4.3	1.50	3.31	.188	3.00	.313	1.00
5X 2X .188/.313T	5.30	83.5	13.9	87.4	.8	1.0	6.3	1.56	5.31	.188	2.00	.313	1.37
6X 2X .188/.313T	5.95	97.9	14.3	103.6	.8	1.1	7.3	1.75	6.31	.188	2.00	.313	1.56
7X 2X .188/.313T	6.15	107.9	14.0	114.9	.9	1.1	8.2	1.81	7.25	.188	2.00	.313	1.74
5X 3X .188/.313T	6.39	93.8	15.3	99.3	.8	1.1	6.3	1.88	5.31	.188	3.00	.313	1.37
5X 4X .188/.313T	6.60	95.2	16.3	101.0	.8	1.1	6.2	1.94	5.25	.188	4.00	.250	1.36
7X 3X .188/.313T	7.00	121.6	16.0	131.1	.9	1.1	8.2	2.06	7.25	.188	3.00	.250	1.74
6X 4X .188/.313T	7.24	113.5	17.0	122.1	.9	1.1	7.2	2.13	6.25	.188	4.00	.250	1.55
5X 4X .188/.313T	7.45	103.4	17.8	110.8	.8	1.1	6.2	2.19	5.31	.188	4.00	.313	1.37
7X 3X .188/.313T	7.65	132.1	17.5	143.7	1.0	1.1	8.2	2.25	7.31	.188	3.00	.313	1.75
7X 4X .188/.313T	7.85	135.0	18.1	147.3	1.0	1.1	8.2	2.31	7.25	.188	4.00	.250	1.74
6X 4X .188/.313T	8.09	124.2	18.7	135.0	.9	1.1	7.2	2.38	6.31	.188	4.00	.313	1.56
7X 4X .188/.313T	9.15	136.8	20.9	163.9	1.0	1.1	8.2	2.56	7.31	.188	5.00	.313	1.75
6X 5X .188/.313T	9.70	148.4	20.0	150.7	1.0	1.1	7.2	2.69	6.31	.188	5.00	.313	1.56
6X 3X .250/.375T	9.55	132.7	19.9	145.9	1.0	1.1	7.3	2.81	6.44	.250	3.00	.438	2.11
7X 5X .188/.313T	9.79	164.7	22.5	184.6	1.1	1.1	8.2	2.89	7.31	.188	5.00	.313	1.75
6X 4X .250/.375T	10.20	139.6	21.3	154.7	1.0	1.1	7.3	3.00	6.38	.250	4.00	.375	2.10
7X 3X .250/.375T	10.40	160.2	21.6	179.4	1.1	1.1	8.3	3.06	7.44	.250	3.00	.438	2.36
8X 3X .250/.375T	10.64	180.3	22.1	203.9	1.1	1.1	9.2	3.13	8.38	.250	3.00	.375	2.60
9X 3X .250/.375T	10.95	199.5	22.4	227.6	1.2	1.1	10.2	3.19	9.31	.250	3.00	.313	2.83
8X 4X .250/.375T	11.05	187.4	23.3	213.3	1.2	1.1	9.2	3.25	8.31	.250	4.00	.313	2.58
11.25	192.3	23.6	219.6	219.6	1.2	1.1	9.3	3.31	8.44	.250	3.00	.438	2.61
11.49	214.3	24.2	247.2	247.2	1.3	1.2	10.2	3.38	9.38	.250	3.00	.375	2.85
11.70	235.7	24.6	274.4	274.4	1.3	1.2	11.1	3.44	10.31	.250	3.00	.313	3.08
11.90	203.1	25.4	234.1	234.1	1.2	1.2	9.2	3.50	8.38	.250	4.00	.375	2.60
12.10	228.8	26.0	266.7	266.7	1.3	1.2	10.3	3.56	9.44	.250	3.00	.438	2.86
12.34	252.8	26.6	297.7	297.7	1.4	1.2	11.2	3.63	10.38	.250	3.00	.375	3.10
12.75	262.3	28.0	311.8	311.8	1.4	1.2	11.1	3.75	10.31	.250	4.00	.313	3.08
12.95	245.5	28.6	290.0	290.0	1.4	1.2	10.1	3.81	9.31	.250	5.00	.313	2.83
13.13	225.8	28.8	265.3	265.3	1.3	1.2	9.2	3.88	8.38	.250	5.00	.375	2.60
13.60	285.0	30.7	343.1	343.1	1.5	1.2	11.2	4.00	10.38	.250	5.00	.375	3.10
13.80	288.3	31.4	348.9	348.9	1.5	1.2	11.1	4.06	10.31	.250	5.00	.313	3.08
14.04	268.3	31.7	322.4	322.4	1.4	1.2	10.2	4.13	9.38	.250	5.00	.375	2.85
14.25	244.2	31.5	291.3	291.3	1.4	1.2	9.2	4.19	8.44	.250	5.00	.438	2.61
14.45	306.3	33.4	374.2	374.2	1.5	1.2	11.2	4.25	10.44	.250	4.00	.438	3.11
14.89	315.4	34.8	388.0	388.0	1.6	1.2	11.1	4.38	10.38	.250	5.00	.375	3.10
15.10	290.5	34.7	355.1	355.1	1.5	1.2	10.2	4.44	9.44	.250	5.00	.438	2.86
15.30	293.1	35.4	359.2	359.2	1.5	1.2	10.2	4.50	9.38	.250	6.00	.375	2.85

2.0000 - 2 in.



\*\*\*\*\* BEAM DIMENSIONS \*\*\*\*\*

2.0000 - 2 in.

2.000 IN. PLATE (AREA=152.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL							WEB THICK	FLANGE WIDTH	THICK	
14X 8X .375/.594T	34.00	880.4	101.0	1503.8	3.0	1.7	14.9	10.00	14.59	.375	8.00	.594	6.22
14X 9X .375/.531T	34.10	880.1	101.5	1504.4	3.0	1.7	14.8	10.03	14.53	.375	9.00	.531	6.20
16X 6X .438/.531T	34.65	944.7	37.2	1632.6	3.2	1.7	16.8	10.19	16.53	.438	6.00	.531	8.12
16X 5X .438/.656T	34.95	957.2	38.3	1634.2	3.2	1.7	16.9	10.28	16.66	.438	5.00	.656	8.17
12X10X .375/.594T	35.50	773.7	100.7	1299.9	2.8	1.7	12.9	10.44	12.59	.375	10.00	.594	5.47
14X 8X .375/.656T	35.70	919.8	108.2	1612.9	3.2	1.8	14.9	10.50	14.66	.375	8.00	.656	6.25
16X 6X .438/.594T	35.90	983.6	103.3	1737.5	3.3	1.8	16.8	10.56	16.59	.438	6.00	.594	8.14
14X10X .375/.531T	35.90	919.9	109.4	1616.1	3.2	1.8	14.8	10.56	14.53	.375	10.00	.531	6.20
16X 5X .438/.719T	36.01	990.3	103.5	1753.9	3.3	1.8	16.9	10.59	16.72	.438	5.00	.719	8.20
14X 9X .375/.594T	36.01	924.7	103.8	1628.2	3.2	1.8	14.8	10.59	14.59	.375	9.00	.594	6.22
16X 6X .438/.656T	37.20	1021.5	109.4	1844.6	3.4	1.8	16.9	10.34	16.66	.438	6.00	.656	8.17
18X 6X .438/.531T	37.60	1136.5	113.2	2113.2	3.6	1.9	18.7	11.06	18.53	.438	6.00	.531	8.99
18X 5X .438/.656T	37.94	1150.2	114.6	2152.4	3.6	1.9	18.8	11.16	18.66	.438	5.00	.656	9.05
14X10X .375/.594T	38.05	966.7	118.7	1753.5	3.3	1.8	14.8	11.19	14.59	.375	10.00	.594	6.22
16X 6X .438/.719T	39.45	1057.8	115.6	1950.9	3.5	1.8	16.9	11.31	16.72	.438	6.00	.719	8.20
18X 6X .438/.594T	38.90	1180.2	120.2	2245.8	3.7	1.9	18.7	11.44	18.59	.438	6.00	.594	9.02
18X 5X .438/.719T	39.00	1186.4	120.3	2262.7	3.7	1.9	18.8	11.47	18.72	.438	5.00	.719	9.08
16X 8X .438/.594T	39.95	1091.4	123.2	2058.5	3.5	1.9	16.7	11.75	16.59	.438	8.00	.594	8.14
16X 9X .438/.531T	40.05	1091.8	123.9	2061.7	3.5	1.9	16.6	11.78	16.53	.438	9.00	.531	8.12
14X11X .375/.594T	40.05	1006.6	127.6	1879.0	3.4	1.9	14.7	11.78	14.59	.375	11.00	.594	6.22
18X 7X .438/.594T	40.90	1241.3	131.2	2443.9	3.9	2.0	18.6	12.03	18.59	.438	7.00	.594	9.02
18X 8X .438/.531T	41.24	1249.2	133.3	2472.6	3.9	2.0	18.6	12.13	18.53	.438	8.00	.531	8.99
18X 6X .438/.719T	41.45	1260.8	133.8	2506.8	3.9	2.0	18.7	12.19	18.72	.438	6.00	.719	9.08
16X10X .438/.531T	41.85	1136.0	133.0	2205.8	3.7	1.9	16.6	12.31	16.53	.438	10.00	.531	8.12
16X 9X .438/.594T	41.96	1140.1	133.2	2217.9	3.7	1.9	16.6	12.34	16.59	.438	9.00	.594	8.14
18X 7X .438/.656T	42.40	1202.2	138.9	2588.7	4.0	2.0	18.6	12.47	18.66	.438	7.00	.656	9.05
14X11X .375/.656T	42.40	1051.0	137.6	2026.4	3.5	1.9	14.7	12.47	14.66	.375	11.00	.656	6.25
18X 9X .438/.531T	43.04	1299.7	143.2	2648.8	4.0	2.0	18.5	12.66	18.53	.438	9.00	.531	8.99
16X10X .438/.594T	44.00	1186.1	143.4	2378.2	3.8	2.0	16.6	12.94	16.59	.438	10.00	.594	8.14
18X 8X .438/.656T	44.64	1366.2	151.7	2815.9	4.1	2.1	18.6	13.13	18.66	.438	8.00	.656	9.05
16X11X .438/.594T	46.00	1227.8	153.2	2532.4	3.9	2.1	16.5	13.53	16.59	.438	11.00	.594	8.14
16X10X .438/.656T	46.10	1233.0	153.6	2548.8	3.9	2.1	16.6	13.56	16.66	.438	10.00	.656	8.17
18X 9X .438/.656T	46.95	1402.0	164.0	3033.5	4.3	2.2	18.5	13.78	18.66	.438	9.00	.656	9.05
18X10X .438/.594T	46.95	1402.3	164.9	3037.4	4.3	2.2	18.4	13.81	18.59	.438	10.00	.594	9.02
16X10X .438/.719T	48.25	1278.2	164.2	2723.2	4.0	2.1	16.6	14.19	16.72	.438	10.00	.719	8.20
16X11X .438/.656T	48.35	1277.2	164.7	2722.8	4.0	2.1	16.5	14.22	16.66	.438	11.00	.656	8.17
18X10X .438/.656T	49.10	1453.4	176.3	3249.0	4.4	2.2	18.4	14.44	18.66	.438	10.00	.656	9.05
16X11X .438/.719T	50.59	1322.4	176.1	2908.8	4.2	2.2	16.5	14.31	16.72	.438	11.00	.719	8.20
18X11X .438/.656T	51.31	1501.2	188.6	3461.5	4.6	2.3	18.4	15.09	18.66	.438	11.00	.656	9.05
21X 8X .500/.625T	52.70	1672.8	188.0	3993.2	4.9	2.4	21.2	15.50	21.63	.500	8.00	.625	11.82
18X12X .438/.656T	53.55	1545.7	200.9	3673.3	4.7	2.4	18.3	15.75	18.66	.438	12.00	.656	9.05
21X 8X .500/.688T	54.40	1721.7	198.6	4219.0	5.0	2.5	21.2	16.00	21.69	.500	8.00	.688	11.85
21X 8X .500/.750T	56.10	1767.4	209.1	4441.3	5.1	2.5	21.2	16.50	21.75	.500	8.00	.750	11.88
21X10X .500/.625T	56.95	1783.8	215.0	4533.6	5.2	2.5	21.1	16.75	21.63	.500	10.00	.625	11.82
21X 9X .500/.750T	58.65	1830.4	225.6	4770.6	5.3	2.6	21.1	17.25	21.75	.500	9.00	.750	11.88

2.0000 - 2 in.



2.000 IN. PLATE (AREA=152.00 SQ.IN.)

***** BEAM DIMENSIONS *****													
NOMINAL SIZE	SECTION MODULUS			R	YP	YF	AREA	DEPTH	FLANGE		SHEAR AREA		
	WT/FT	ZPL	ZFL						WEB THICK	WIDTH		THICK	
21X11X .500/.625I	59.09	1835.0	228.7	4806.2	5.3	2.6	21.0	17.38	21.63	.500	11.00	.625	11.82
21X 8X .500/.875I	53.50	1655.2	230.5	4896.9	5.4	2.6	21.2	17.50	21.88	.500	8.00	.875	11.94
21X10X .500/.750I	61.20	1887.0	241.8	5083.8	5.5	2.7	21.1	18.00	21.75	.500	10.00	.750	11.88
21X11X .500/.688I	61.40	1889.0	243.3	5106.8	5.5	2.7	21.0	18.06	21.69	.500	11.00	.688	11.85
21X13X .500/.688I	66.10	1983.1	273.4	5591.3	5.8	2.9	20.8	19.44	21.69	.500	13.00	.688	11.85
21X12X .500/.750I	66.30	1989.6	274.4	5726.7	5.8	2.9	20.9	19.50	21.75	.500	12.00	.750	11.88
21X11X .500/.875I	68.44	2033.9	287.4	6013.2	5.9	3.0	20.9	20.13	21.88	.500	11.00	.875	11.94
24X 9X .625/.750I	73.95	2213.5	291.0	6879.7	6.3	3.1	23.6	21.75	24.75	.625	9.00	.750	16.72
24X10X .625/.750I	76.50	2271.2	309.6	7287.8	6.5	3.2	23.5	22.50	24.75	.625	10.00	.750	16.72
24X11X .625/.750I	79.05	2323.6	327.8	7684.5	6.6	3.3	23.4	23.25	24.75	.625	11.00	.750	16.72
24X10X .625/.875I	80.75	2362.3	339.3	7974.3	6.7	3.4	23.5	23.75	24.88	.625	10.00	.875	16.80
24X 9X .625/1.125I	95.44	2458.9	371.7	8759.3	7.0	3.6	23.6	25.13	25.13	.625	9.00	1.125	16.96
24X13X .625/.875I	89.69	2516.6	403.6	9349.5	7.2	3.7	23.2	26.38	24.88	.625	13.00	.875	16.80
24X14X .625/.875I	92.65	2561.4	425.1	9800.2	7.4	3.8	23.1	27.25	24.88	.625	14.00	.875	16.80
24X11X .625/1.125I	93.03	2560.4	426.9	9937.8	7.4	3.9	23.3	27.38	25.13	.625	11.00	1.125	16.96
24X12X .625/1.125I	96.90	2633.2	454.3	10511.9	7.6	4.0	23.1	28.50	25.13	.625	12.00	1.125	16.96
27X 9X .688/1.125I	97.55	2839.8	446.0	11614.5	9.0	4.1	26.0	28.69	28.13	.688	9.00	1.125	20.73
24X16X .625/.875I	98.60	2641.7	467.8	10683.4	7.7	4.0	22.8	29.00	24.88	.625	16.00	.875	16.80
27X12X .688/.875I	98.80	2852.0	458.2	11796.4	8.1	4.1	25.7	29.06	27.88	.688	12.00	.875	20.56
27X13X .688/.875I	101.80	2901.5	482.2	12355.3	8.2	4.3	25.6	29.94	27.88	.688	13.00	.875	20.56
27X11X .688/1.125I	105.20	2966.3	507.9	13065.0	9.5	4.4	25.7	30.94	28.13	.688	11.00	1.125	20.73
30X13X .750/.875I	115.19	3285.2	569.9	15967.6	9.3	4.9	28.0	33.88	30.88	.750	13.00	.875	24.66
27X14X .688/1.125I	116.65	3118.6	599.5	15150.6	9.0	4.9	25.3	34.31	28.13	.688	14.00	1.125	20.73
30X11X .750/1.125I	118.53	3351.2	598.0	16811.4	9.5	5.0	28.1	34.89	31.13	.750	11.00	1.125	24.85
27X15X .688/1.125I	120.50	3163.7	630.7	15944.7	9.2	5.0	25.1	35.44	28.13	.688	15.00	1.125	20.73
30X12X .750/1.125I	122.40	3409.1	632.1	17666.4	9.7	5.2	27.9	36.00	31.13	.750	12.00	1.125	24.85
30X16X .750/.875I	124.10	3420.3	649.1	17937.6	9.8	5.2	27.6	36.50	30.88	.750	16.00	.875	24.66
27X16X .688/1.125I	124.30	3203.7	661.0	16509.3	9.4	5.2	25.0	36.56	28.13	.688	16.00	1.125	20.73
30X14X .750/1.125I	130.05	3511.2	699.8	19331.0	10.1	5.5	27.6	38.25	31.13	.750	14.00	1.125	24.85
30X10X .875/1.375I	136.00	3432.9	678.8	18738.8	9.9	5.5	27.9	40.00	31.38	.875	10.00	1.375	29.21
33X12X .875/1.125I	144.09	3797.4	756.4	22730.4	10.8	6.0	30.1	42.38	34.13	.875	12.00	1.125	31.61
33X10X .875/1.375I	144.94	3820.1	761.5	23098.0	10.9	6.0	30.3	42.63	34.38	.875	10.00	1.375	31.83
36X10X .875/1.125I	145.35	4059.2	770.4	25337.2	11.4	6.2	32.9	42.75	37.13	.875	10.00	1.125	34.24
33X11X .875/1.375I	149.60	3885.6	806.8	24305.7	11.1	6.3	30.1	44.00	34.38	.875	11.00	1.375	31.83
33X14X .875/1.125I	151.74	3900.8	829.9	24724.8	11.2	6.3	29.8	44.63	34.13	.875	14.00	1.125	31.61
36X10X .875/1.500I	154.10	4276.5	908.1	29371.3	12.2	6.9	32.6	46.50	37.50	.875	10.00	1.500	34.56
36X14X .875/1.375I	172.55	4452.0	1052.6	33526.3	12.9	7.5	31.8	50.75	37.38	.875	14.00	1.375	34.46
36X15X .875/1.500I	183.60	4572.9	1168.4	36710.6	13.3	9.0	31.5	54.00	37.50	.875	15.00	1.500	34.56

2.0000 - 2 in.

APPENDIX B  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HY-100 STEEL



.125 IN. PLATE (AREA= .53 SQ. IN.)

0.1250 - 1/8 in.

125 IN. PLATE (AREA= .53 SQ.IN.)

***** BEAM DIMENSIONS *****												
NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	FLANGE		SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	
7X 7X .250/ .430T	16.35	7.3	18.3	39.4	2.7	5.4	2.2	4.81	7.44	.250	.438	1.89
10X 4X .313/ .430T	16.59	12.6	18.7	79.6	3.8	6.3	4.3	4.88	18.44	.313	.438	3.31
9X 6X .250/ .430T	16.59	10.3	21.4	66.4	3.5	6.5	3.1	4.88	9.44	.250	.438	2.39
10X 5X .313/ .375T	17.00	12.7	19.8	81.2	3.8	6.4	4.1	5.00	10.38	.313	.375	3.29
8X 7X .250/ .430T	17.20	8.6	21.1	53.2	3.1	6.0	2.5	5.06	8.44	.250	.438	2.14
10X 4X .313/ .500T	17.44	12.9	20.4	86.1	3.9	6.5	4.1	5.13	10.50	.313	.500	3.33
9X 7X .250/ .430T	18.05	10.4	24.2	69.7	3.5	6.7	2.9	5.31	9.44	.250	.438	2.39
10X 6X .313/ .375T	18.29	13.0	22.4	86.6	3.8	6.6	3.9	5.38	10.38	.313	.375	3.29
10X 5X .313/ .500T	19.14	13.3	23.9	98.9	3.8	6.8	3.8	5.63	10.50	.313	.500	3.33
10X 6X .313/ .430T	19.55	13.4	24.9	91.8	3.8	6.9	3.7	5.75	10.44	.313	.438	3.31
10X 5X .313/ .563T	20.28	13.6	25.9	95.3	3.8	7.0	3.7	5.94	10.56	.313	.563	3.34
10X 6X .313/ .500T	20.84	13.7	27.3	96.8	3.8	7.1	3.5	6.13	10.50	.313	.500	3.33
10X 7X .313/ .430T	21.05	13.6	27.9	96.8	3.8	7.1	3.5	6.13	10.44	.313	.438	3.31
9X 7X .313/ .500T	21.45	11.9	27.2	79.5	3.4	6.7	2.9	6.31	9.50	.313	.500	3.01
12X 4X .375/ .469T	21.69	18.5	25.9	136.0	4.4	7.3	5.2	6.38	12.47	.375	.469	4.72
10X 6X .313/ .563T	22.10	13.9	29.7	101.3	3.8	7.3	3.4	6.50	10.56	.313	.563	3.34
10X 7X .313/ .500T	22.54	13.9	30.7	101.8	3.8	7.3	3.3	6.63	10.50	.313	.500	3.33
12X 4X .375/ .531T	22.94	18.9	27.9	142.8	4.5	7.5	5.1	6.63	12.53	.375	.531	4.75
9X 7X .313/ .563T	22.95	12.1	29.7	83.2	3.4	6.9	2.8	6.75	9.56	.313	.563	3.03
9X 8X .313/ .500T	23.15	12.1	30.2	82.9	3.4	6.9	2.7	6.81	9.50	.313	.500	3.01
12X 5X .375/ .469T	23.26	19.2	29.9	147.1	4.5	7.7	4.9	6.84	12.47	.375	.469	4.72
12X 4X .375/ .591T	23.39	19.3	29.8	149.2	4.5	7.7	5.0	6.88	12.59	.375	.594	4.77
10X 7X .313/ .563T	24.80	14.2	33.4	106.3	3.7	7.5	3.2	7.06	10.56	.313	.563	3.34
10X 8X .313/ .500T	24.24	14.1	34.2	106.2	3.7	7.5	3.1	7.13	10.50	.313	.500	3.33
12X 4X .375/ .656T	24.24	19.7	31.6	155.3	4.5	7.9	4.9	7.13	12.66	.375	.656	4.79
9X 8X .313/ .563T	24.85	12.3	32.9	86.6	3.3	7.1	2.6	7.31	9.56	.313	.563	3.03
12X 6X .375/ .469T	24.85	19.7	33.8	156.8	4.5	8.0	4.6	7.31	12.47	.375	.469	4.72
12X 5X .375/ .591T	25.48	20.0	34.6	161.4	4.5	8.1	4.7	7.47	12.59	.375	.594	4.77
10X 8X .313/ .563T	25.94	14.4	37.3	110.9	3.7	7.7	3.0	7.63	10.56	.313	.563	3.34
12X 5X .375/ .656T	26.45	20.4	36.9	168.0	4.5	8.2	4.5	7.78	12.66	.375	.656	4.79
12X 7X .375/ .469T	26.45	20.2	37.6	165.4	4.5	8.2	4.4	7.78	12.47	.375	.469	4.72
12X 6X .375/ .591T	27.48	20.6	39.4	171.9	4.5	8.4	4.4	8.06	12.59	.375	.594	4.77
12X 7X .375/ .531T	27.95	20.6	41.0	173.5	4.5	8.4	4.2	8.22	12.53	.375	.531	4.75
12X 6X .375/ .656T	28.70	20.9	42.1	175.8	4.5	8.5	4.2	8.44	12.66	.375	.656	4.79
12X 8X .375/ .531T	29.75	21.0	45.2	181.1	4.4	8.6	4.1	8.66	12.59	.375	.531	4.75
14X 5X .438/ .531T	29.85	27.4	41.1	240.9	5.1	8.8	5.9	8.78	14.53	.438	.531	6.42
14X 5X .438/ .591T	30.91	28.0	43.9	251.4	5.1	9.0	5.7	9.09	14.59	.438	.594	6.45
12X 8X .375/ .591T	31.45	21.4	49.0	185.2	4.4	8.9	3.9	9.25	12.59	.375	.594	4.77
12X 9X .375/ .531T	31.55	21.3	49.6	185.7	4.4	8.9	3.8	9.28	12.53	.375	.531	4.75
14X 6X .438/ .531T	31.65	28.2	46.2	256.7	5.1	9.1	5.6	9.31	14.53	.438	.531	6.42
14X 5X .438/ .656T	31.99	28.5	46.6	261.5	5.1	9.2	5.6	9.41	14.66	.438	.656	6.48
16X 5X .438/ .531T	32.84	34.0	49.2	334.8	5.7	9.9	6.8	9.66	16.53	.438	.531	7.29
14X 6X .438/ .591T	32.95	28.8	49.5	267.9	5.1	9.3	5.4	9.69	14.59	.438	.594	6.45
14X 5X .438/ .719T	33.05	29.0	49.2	271.1	5.1	9.3	5.5	9.72	14.72	.438	.719	6.58

0.1250 - 1/8 in.



0.125 IN. PLATE (AREA= .53 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				BEAM DIMENSIONS				SHEAR						
		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WE3 THICK	WIDTH	FLANGE THICK	THICK	THICK	THICK
12X 8X	.375/.656T	33.15	21.7	52.5	196.4	4.4	9.0	3.7	9.75	12.66	.375	8.00	8.00	.656	4.79	4.79
14X 7X	.438/.531T	33.46	28.9	51.3	270.8	5.1	9.4	5.3	9.84	14.53	.438	7.00	7.00	.531	6.42	6.42
16X 5X	.438/.594T	33.90	34.7	52.4	348.9	5.0	10.1	6.7	9.97	16.59	.438	5.00	5.00	.594	7.32	7.32
14X 6X	.438/.656T	34.20	29.3	52.7	278.7	5.1	9.5	5.3	10.06	14.66	.438	6.00	6.00	.656	6.48	6.48
16X 6X	.438/.531T	34.65	35.0	55.1	356.4	5.0	10.2	6.5	10.19	16.53	.438	6.00	6.00	.531	7.29	7.29
16X 5X	.438/.656T	34.95	35.3	55.5	362.5	5.0	10.3	6.5	10.28	16.66	.438	5.00	5.00	.656	7.35	7.35
14X 7X	.438/.594T	34.95	29.5	55.1	282.6	5.1	9.6	5.1	10.28	14.59	.438	7.00	7.00	.594	6.45	6.45
14X 8X	.438/.531T	35.29	29.5	56.3	283.6	5.1	9.6	5.0	10.38	14.53	.438	8.00	8.00	.531	6.42	6.42
16X 6X	.438/.594T	35.90	35.7	58.9	371.7	5.0	10.4	6.3	10.56	16.59	.438	6.00	6.00	.594	7.32	7.32
16X 5X	.438/.719T	36.01	36.0	58.7	375.5	5.0	10.4	6.4	10.59	16.72	.438	5.00	5.00	.719	7.38	7.38
16X 7X	.438/.531T	36.45	35.9	60.9	375.9	5.0	10.5	6.2	10.72	16.53	.438	7.00	7.00	.531	7.29	7.29
14X 8X	.438/.594T	36.99	30.1	60.7	295.8	5.1	9.8	4.9	10.88	14.59	.438	8.00	8.00	.594	6.45	6.45
14X 9X	.438/.531T	37.09	30.0	61.3	295.1	5.1	9.8	4.8	10.91	14.53	.438	9.00	9.00	.531	6.42	6.42
16X 7X	.438/.594T	37.94	36.6	65.3	392.1	5.0	10.7	6.0	11.16	16.59	.438	7.00	7.00	.594	7.32	7.32
16X 8X	.438/.531T	38.25	36.6	66.5	393.5	5.0	10.7	5.9	11.25	16.53	.438	8.00	8.00	.531	7.29	7.29
16X 6X	.438/.719T	38.45	37.0	68.3	400.2	5.0	10.8	6.0	11.31	16.72	.438	6.00	6.00	.719	7.38	7.38
16X 7X	.438/.656T	39.41	37.3	69.6	407.5	5.0	10.9	5.9	11.59	16.66	.438	7.00	7.00	.656	7.35	7.35
16X 8X	.438/.594T	39.95	37.4	71.6	410.5	5.0	11.0	5.7	11.75	16.59	.438	8.00	8.00	.594	7.32	7.32
16X 9X	.438/.531T	40.05	37.3	72.2	409.7	5.0	11.0	5.7	11.78	16.53	.438	9.00	9.00	.531	7.29	7.29
16X 7X	.438/.719T	40.90	37.9	73.9	422.1	5.0	11.1	5.7	12.03	16.72	.438	7.00	7.00	.719	7.38	7.38
16X 8X	.438/.656T	41.65	38.0	75.5	426.5	5.0	11.2	5.6	12.25	16.66	.438	8.00	8.00	.656	7.35	7.35
18X 5X	.500/.656T	41.75	46.7	68.0	520.4	6.4	11.1	7.6	12.28	18.66	.500	5.00	5.00	.656	9.39	9.39
16X 9X	.438/.594T	41.96	38.0	78.0	427.3	5.0	11.2	5.5	12.34	16.59	.438	9.00	9.00	.594	7.32	7.32
16X 5X	.500/.875T	42.09	40.8	68.4	434.4	5.0	10.7	6.4	12.38	16.88	.500	5.00	5.00	.875	8.50	8.50
18X 6X	.500/.594T	42.70	47.3	71.9	533.5	6.4	11.3	7.4	12.56	18.59	.500	6.00	6.00	.594	9.36	9.36
18X 5X	.500/.719T	42.81	47.6	71.5	538.3	6.4	11.3	7.5	12.59	18.72	.500	5.00	5.00	.719	9.42	9.42
14X10X	.438/.656T	43.15	31.5	76.7	330.5	5.0	10.5	4.3	12.69	14.66	.438	18.00	18.00	.656	6.48	6.48
16X 8X	.438/.719T	43.35	38.7	81.4	441.6	5.0	11.4	5.4	12.75	16.72	.438	8.00	8.00	.719	7.38	7.38
16X 9X	.438/.656T	43.09	38.7	83.4	443.6	5.7	11.5	5.3	12.91	16.66	.438	9.00	9.00	.656	7.35	7.35
18X 6X	.500/.656T	44.00	48.2	76.0	553.8	6.4	11.5	7.3	12.94	18.66	.500	6.00	6.00	.656	9.39	9.39
14X10X	.438/.594T	44.00	38.6	84.3	442.6	5.7	11.5	5.2	12.94	16.59	.438	10.00	10.00	.594	7.32	7.32
14X11X	.438/.656T	45.36	31.9	82.5	340.3	5.0	10.7	4.1	13.34	14.66	.438	11.00	11.00	.656	6.48	6.48
16X 9X	.438/.719T	45.80	39.3	89.0	459.2	5.7	11.7	5.2	13.47	16.72	.438	9.00	9.00	.719	7.38	7.38
16X10X	.438/.656T	46.10	39.3	90.3	459.3	5.7	11.7	5.1	13.56	16.66	.438	10.00	10.00	.656	7.35	7.35
18X 7X	.500/.719T	47.70	50.3	88.8	604.9	6.4	12.0	6.8	14.03	18.72	.500	7.00	7.00	.719	9.42	9.42
18X 6X	.500/.875T	48.45	51.0	90.4	619.3	6.5	12.2	6.9	14.25	18.88	.500	6.00	6.00	.875	9.50	9.50
18X 5X	.500/.719T	50.15	51.4	97.3	633.5	6.4	12.3	6.5	14.75	18.72	.500	8.00	8.00	.719	9.42	9.42
18X 9X	.500/.656T	50.69	51.4	99.6	637.1	6.4	12.4	6.4	14.91	18.66	.500	9.00	9.00	.656	9.39	9.39
18X10X	.500/.594T	50.80	51.3	100.5	636.0	6.4	12.4	6.3	14.94	18.59	.500	10.00	10.00	.594	9.36	9.36
18X 7X	.500/.875T	51.44	52.2	100.5	653.2	6.5	12.5	6.5	15.13	18.88	.500	7.00	7.00	.875	9.50	9.50
18X 9X	.500/.719T	52.60	52.3	105.7	659.4	6.4	12.6	6.2	15.47	18.72	.500	9.00	9.00	.719	9.42	9.42
18X10X	.500/.656T	52.90	52.3	107.2	660.2	6.4	12.6	6.2	15.56	18.66	.500	10.00	10.00	.656	9.39	9.39
18X 8X	.500/.875T	54.40	53.3	110.7	683.6	6.4	12.8	6.2	16.00	18.88	.500	8.00	8.00	.875	9.50	9.50
18X11X	.500/.656T	55.15	53.0	115.0	681.6	6.4	12.9	5.9	16.22	18.66	.500	11.00	11.00	.656	9.39	9.39
18X11X	.500/.719T	57.49	53.8	122.6	705.1	6.4	13.1	5.7	16.91	18.72	.500	11.00	11.00	.719	9.42	9.42

0.1250 - 1/8 in.

0.125 IN. PLATE (AREA= .53 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	WEB THICK	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	FLANGE THICK	
10X12X .500/.719T	59.94	54.5	130.9	725.2	6.3	13.3	5.5	17.63	18.72	.500	12.00	.719	9.42
10X10X .500/.875T	60.35	55.0	130.7	735.7	6.3	13.4	5.6	17.75	18.88	.500	10.00	.875	9.50
21X8X .625/.875T	68.44	80.8	142.9	1135.7	7.4	14.1	7.9	20.13	21.88	.625	8.00	.875	13.75
21X10X .625/.750T	70.14	81.4	150.9	1156.2	7.4	14.2	7.7	20.63	21.75	.625	10.00	.750	13.67
21X9X .625/.875T	71.40	82.4	154.8	1183.0	7.4	14.4	7.6	21.00	21.88	.625	9.00	.875	13.75
21X11X .625/.750T	72.69	82.6	161.3	1194.8	7.4	14.5	7.4	21.38	21.75	.625	11.00	.750	13.67
21X10X .625/.875T	74.39	83.7	166.8	1226.8	7.4	14.7	7.4	21.88	21.88	.625	10.00	.875	13.75
21X9X .625/1.125T	79.05	86.5	182.5	1305.8	7.4	15.1	7.2	23.25	22.13	.625	9.00	1.125	13.91
21X12X .625/.875T	90.34	86.1	190.2	1304.4	7.3	15.1	6.9	23.63	21.00	.625	12.00	.875	13.75
21X9X .688/.875T	82.89	110.8	190.3	1751.6	8.4	15.8	9.2	24.38	24.88	.688	9.00	.875	17.28
21X13X .625/.875T	83.30	87.1	202.0	1339.3	7.3	15.4	6.6	24.50	21.88	.625	13.00	.875	13.75
21X10X .688/.875T	85.85	112.8	203.9	1816.6	8.4	16.1	8.9	25.25	24.88	.688	10.00	.875	17.28
21X14X .625/.875T	86.29	88.0	213.5	1371.7	7.3	15.6	6.4	25.38	21.88	.625	14.00	.875	13.75
21X8X .688/1.125T	86.70	114.3	205.1	1853.6	8.4	16.2	9.0	25.50	25.13	.688	8.00	1.125	17.38
21X11X .688/.875T	88.84	114.7	217.5	1877.2	8.4	16.4	8.6	26.13	24.88	.688	11.00	.875	17.28
21X9X .688/1.125T	90.54	116.5	222.5	1931.1	8.4	16.6	8.7	26.63	25.13	.688	9.00	1.125	17.38
21X12X .688/.875T	91.88	116.2	231.2	1934.1	8.4	16.6	8.4	27.00	24.88	.688	12.00	.875	17.28
21X13X .688/.875T	94.79	117.7	244.7	1987.5	8.4	16.9	8.1	27.88	24.88	.688	13.00	.875	17.28
21X11X .688/1.125T	98.19	120.3	256.4	2068.0	8.4	17.2	6.1	28.88	25.13	.688	11.00	1.125	17.38
21X8X .750/1.125T	99.45	149.1	247.7	2830.3	9.4	17.6	10.6	29.25	28.13	.750	8.00	1.125	21.19
21X11X .750/.875T	101.59	149.9	261.5	2668.2	9.4	17.8	10.2	29.88	27.88	.750	11.00	.875	21.00
21X9X .750/1.125T	103.29	152.2	267.2	2740.0	9.4	18.0	10.3	30.38	28.13	.750	9.00	1.125	21.19
21X12X .750/.875T	104.55	152.1	276.8	2749.4	9.4	18.1	9.9	30.75	27.88	.750	12.00	.875	21.00
21X10X .750/1.125T	107.10	155.0	286.5	2842.0	9.4	18.3	9.9	31.50	28.13	.750	10.00	1.125	21.19
21X11X .750/1.375T	122.40	178.2	316.5	3249.9	9.4	18.7	9.6	32.63	28.13	.750	11.00	1.375	21.19
30X10X .875/1.375T	136.00	217.9	391.8	4410.9	10.4	20.2	11.3	40.00	31.38	.875	9.00	1.375	24.94
30X13X .875/1.125T	138.99	218.7	412.8	4468.3	10.4	20.4	10.8	40.88	31.13	.875	10.00	1.375	27.57
30X11X .875/1.375T	140.69	221.4	417.8	4559.5	10.4	20.6	10.9	41.38	31.38	.875	13.00	1.375	27.35
30X14X .875/1.125T	142.80	221.4	434.4	4583.7	10.4	20.7	10.6	42.00	31.13	.875	14.00	1.375	27.35
30X10X .875/1.375T	154.70	230.2	435.7	4952.2	10.4	21.5	10.8	45.50	31.38	.875	14.00	1.375	27.57
33X10X1.000/1.500T	153.20	290.2	491.8	6319.4	11.4	21.8	12.9	48.00	34.50	1.000	10.00	1.500	36.63
33X11X1.000/1.375T	163.64	289.9	436.4	6314.5	11.4	21.8	12.7	48.13	34.38	1.000	11.00	1.375	36.51
33X13X1.000/1.125T	172.14	333.9	553.9	7761.4	12.3	23.2	14.8	50.63	37.13	1.000	13.00	1.125	37.26
33X10X1.000/1.375T	172.99	298.3	554.2	6691.3	11.4	22.4	12.1	50.88	34.38	1.000	13.00	1.375	36.51
33X11X1.000/1.375T	173.84	337.5	560.7	7802.4	12.4	23.4	14.1	51.13	37.38	1.000	11.00	1.375	37.51
33X10X1.000/1.750T	181.90	349.0	607.6	8396.6	12.5	24.1	13.8	53.50	37.75	1.000	10.00	1.750	37.88
33X16X1.000/1.375T	187.00	388.7	640.3	7186.8	11.4	23.3	11.2	55.00	34.38	1.000	16.00	1.375	36.51

0.1250 - 1/8 in.



156 IN. PLATE (AREA= .83 SQ. IN.)

SECTION MODULUS				DIMENSIONS				BEAM				SHEAR AREA					
NOMINAL SIZE				INERTIA				DEPTH				FLANGE		THICK			
WT/FT				ZFL				VP				VF				AREA	
3X 2X .125/ .180T				3.0				1.2				2.1				.75	
4X 2X .125/ .180T				5.4				1.6				2.7				.88	
3X 3X .125/ .180T				3.7				1.5				1.9				.94	
4X 3X .125/ .180T				6.5				1.9				2.5				1.06	
4X 2X .180/ .313T				7.5				2.0				2.5				1.38	
5X 2X .180/ .250T				10.6				2.3				3.1				1.44	
3X 3X .180/ .313T				5.1				1.8				1.7				1.50	
5X 2X .180/ .313T				11.8				2.5				3.0				1.56	
6X 2X .180/ .313T				17.4				2.9				3.5				1.75	
6X 3X .180/ .250T				18.6				3.1				3.3				1.88	
5X 4X .180/ .250T				14.3				2.8				2.6				1.94	
4X 4X .180/ .313T				10.1				2.5				2.0				2.00	
6X 3X .180/ .313T				20.5				3.3				3.2				2.06	
6X 4X .180/ .250T				21.0				3.4				3.1				2.13	
5X 4X .180/ .313T				15.8				3.6				2.9				2.19	
6X 4X .180/ .313T				23.1				3.3				2.2				2.50	
5X 5X .180/ .313T				17.3				3.3				3.7				2.69	
7X 3X .250/ .313T				30.3				3.6				3.0				2.81	
6X 3X .250/ .438T				25.2				4.0				3.6				2.88	
7X 3X .250/ .375T				32.7				3.0				4.2				2.94	
8X 3X .250/ .313T				40.6				4.3				4.4				3.00	
7X 4X .250/ .313T				35.8				4.1				3.5				3.06	
8X 3X .250/ .375T				43.8				4.5				4.0				3.13	
9X 3X .250/ .313T				52.8				4.8				4.7				3.19	
8X 4X .250/ .313T				45.3				4.6				3.9				3.25	
7X 5X .250/ .313T				36.8				4.3				3.2				3.31	
8X 3X .250/ .438T				46.7				4.7				3.9				3.31	
9X 3X .250/ .375T				56.6				5.0				4.5				3.38	
9X 4X .250/ .313T				58.7				5.1				4.3				3.50	
9X 3X .250/ .438T				60.6				5.2				4.6				3.56	
8X 5X .250/ .313T				49.2				4.9				3.6				3.56	
9X 4X .250/ .375T				63.4				5.4				4.2				3.75	
9X 5X .250/ .313T				63.9				5.4				4.1				3.81	
8X 5X .250/ .375T				53.2				5.1				3.4				3.88	
7X 5X .250/ .438T				42.5				4.7				2.9				3.94	
9X 4X .250/ .438T				67.4				5.6				4.0				4.00	
9X 5X .250/ .375T				68.8				5.7				3.9				4.13	
8X 5X .250/ .438T				56.6				5.3				3.3				4.19	
8X 6X .250/ .375T				56.9				5.3				3.2				4.25	
7X 6X .250/ .438T				45.3				5.0				2.6				4.38	
9X 5X .250/ .438T				73.3				5.9				3.7				4.44	
9X 6X .250/ .375T				73.5				5.9				3.6				4.50	
10X 4X .313/ .375T				85.5				5.8				4.7				4.63	
8X 6X .250/ .438T				60.4				5.6				3.0				4.63	

0.1563 - 5/32 in.

-----  
 .156 IN. PLATE (AREA= .83 SQ.IN.)  
 -----

NOMINAL SIZE		SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****				SHEAR AREA	
7X 7X .250/ .430T	WT/FT	ZPL	ZFL	INERTIA				AREA	DEPTH	WEB THICK	FLANGE WIDTH		THICK
10X 4X .313/ .430T	16.35	9.3	19.5	47.7	2.9	5.2	2.4	4.81	7.44	.250	7.00	.430	1.90
10X 6X .313/ .430T	16.59	15.1	19.8	90.9	4.0	6.0	4.6	4.88	10.44	.313	4.00	.430	3.32
9X 6X .250/ .430T	16.59	12.7	22.8	78.2	3.7	6.2	3.4	4.88	9.44	.250	6.00	.430	2.40
10X 5X .313/ .375T	17.00	15.2	20.9	92.8	4.0	6.1	4.4	5.00	10.38	.313	5.00	.375	3.30
8X 7X .250/ .430T	17.20	11.0	22.5	63.5	3.3	5.8	2.8	5.06	8.44	.250	7.00	.430	2.15
10X 4X .313/ .500T	17.44	15.5	21.6	96.0	4.0	6.2	4.4	5.13	10.50	.313	4.00	.500	3.34
9X 7X .250/ .430T	18.05	12.9	25.7	82.4	3.7	6.4	3.2	5.31	9.44	.250	7.00	.430	2.40
10X 6X .313/ .375T	18.29	15.6	23.7	99.1	4.0	6.4	4.2	5.38	10.38	.313	6.00	.375	3.30
10X 5X .313/ .500T	19.14	15.9	25.3	104.1	4.0	6.5	4.1	5.63	10.50	.313	5.00	.500	3.34
10X 6X .313/ .430T	19.55	16.0	26.3	105.3	4.0	6.6	4.0	5.75	10.44	.313	6.00	.430	3.32
10X 5X .313/ .563T	20.20	16.2	27.4	109.3	4.0	6.7	4.0	5.94	10.56	.313	5.00	.563	3.35
10X 6X .313/ .500T	20.84	16.3	28.9	111.1	4.0	6.8	3.8	6.13	10.58	.313	6.00	.500	3.34
10X 7X .313/ .430T	21.05	16.3	29.5	111.2	4.0	6.8	3.8	6.19	10.44	.313	7.00	.430	3.32
9X 7X .313/ .500T	21.45	14.3	28.8	92.3	3.6	6.4	3.2	6.31	9.58	.313	7.00	.500	3.02
12X 4X .375/ .469T	21.69	21.4	27.3	151.5	4.6	7.1	5.6	6.38	12.47	.375	4.00	.469	4.73
10X 6X .313/ .563T	22.10	16.6	31.4	116.4	4.0	7.0	3.7	6.50	10.56	.313	6.00	.563	3.35
10X 7X .313/ .500T	22.54	16.6	32.5	117.1	4.0	7.1	3.6	6.63	10.50	.313	7.00	.500	3.34
12X 4X .375/ .531T	22.54	21.9	29.3	159.0	4.6	7.3	5.4	6.63	12.53	.375	4.00	.531	4.76
9X 7X .313/ .563T	22.95	14.6	31.4	96.8	3.6	6.6	3.1	6.75	9.56	.313	7.00	.563	3.04
9X 8X .313/ .500T	23.15	14.5	32.0	96.5	3.6	6.6	3.0	6.81	9.50	.313	8.00	.500	3.02
12X 5X .375/ .469T	23.26	22.1	31.4	163.9	4.6	7.4	5.2	6.84	12.47	.375	5.00	.469	4.73
12X 4X .375/ .594T	23.39	22.3	31.4	166.2	4.6	7.4	5.3	6.88	12.59	.375	4.00	.594	4.78
10X 7X .313/ .563T	24.00	16.9	35.4	122.5	3.9	7.3	3.5	7.06	10.56	.313	7.00	.563	3.35
10X 8X .313/ .500T	24.24	16.8	36.1	122.4	3.9	7.3	3.4	7.13	10.58	.313	8.00	.500	3.34
12X 4X .375/ .656T	24.24	22.7	33.2	173.1	4.7	7.6	5.2	7.13	12.66	.375	4.00	.656	4.81
9X 8X .313/ .563T	24.85	14.8	34.9	100.9	3.5	6.8	2.9	7.31	9.56	.313	8.00	.563	3.04
12X 6X .375/ .469T	24.85	22.7	35.4	174.9	4.6	7.7	4.9	7.31	12.47	.375	6.00	.469	4.73
12X 5X .375/ .594T	25.40	23.1	36.4	180.0	4.7	7.8	4.9	7.47	12.59	.375	5.00	.594	4.78
10X 8X .313/ .563T	25.94	17.1	39.4	127.9	3.9	7.5	3.2	7.63	10.56	.313	8.00	.563	3.35
12X 5X .375/ .656T	26.45	23.5	38.8	181.5	4.7	8.0	4.8	7.78	12.66	.375	5.00	.656	4.81
12X 7X .375/ .469T	26.45	23.2	39.5	184.7	4.6	7.9	4.7	7.78	12.47	.375	7.00	.469	4.73
12X 6X .375/ .594T	27.40	23.7	41.4	192.0	4.6	8.1	4.6	8.06	12.59	.375	6.00	.594	4.78
12X 7X .375/ .531T	27.95	23.7	43.0	194.0	4.6	8.2	4.5	8.22	12.53	.375	7.00	.531	4.76
12X 6X .375/ .656T	28.70	24.1	44.2	199.8	4.6	8.3	4.5	8.44	12.66	.375	6.00	.656	4.81
12X 7X .375/ .594T	29.44	24.2	46.4	202.5	4.6	8.4	4.4	8.66	12.59	.375	7.00	.594	4.78
12X 8X .375/ .531T	29.75	24.1	47.4	203.0	4.6	8.4	4.3	8.75	12.53	.375	8.00	.531	4.76
14X 5X .438/ .531T	29.85	30.8	42.9	263.2	5.2	8.6	6.1	8.78	14.53	.438	5.00	.531	6.46
14X 5X .438/ .594T	30.91	31.4	45.8	274.7	5.3	8.7	6.0	9.09	14.59	.438	5.00	.594	6.43
12X 8X .375/ .594T	31.45	24.6	51.3	211.8	4.6	8.6	4.1	9.25	12.59	.375	8.00	.594	4.78
12X 9X .375/ .531T	31.55	24.5	51.9	211.2	4.6	8.6	4.1	9.28	12.53	.375	9.00	.531	4.76
14X 6X .438/ .531T	31.65	31.7	48.2	201.6	5.3	8.9	5.8	9.31	14.53	.438	6.00	.531	6.43
14X 5X .438/ .656T	31.99	32.0	48.6	205.8	5.3	8.9	5.9	9.41	14.66	.438	5.00	.656	6.49
16X 5X .438/ .531T	32.84	37.8	51.3	362.9	5.9	9.6	7.1	9.66	16.53	.438	5.00	.531	7.31
14X 6X .438/ .594T	32.95	32.3	51.6	292.9	5.3	9.1	5.7	9.69	14.59	.438	6.00	.594	6.46
14X 5X .438/ .719T	33.05	32.6	51.4	296.4	5.3	9.1	5.8	9.72	14.72	.438	5.00	.719	6.52

0.1563 - 5/32 in.



156 IN. PLATE (AREA= .83 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		YF		AREA		DEPTH		WEB		FLANGE		SHEAR	
WT/FT		ZPL		ZFL		ZPL		YF		AREA		DEPTH		THICK		WIDTH		THICK	
12X 8X	.375/.656T	33.15	25.0	55.1	220.1	4.6	8.8	4.0	9.75	12.66	.375	8.00	.656	4.81	6.46	6.00	.531	6.43	6.43
14X 7X	.438/.531T	33.46	32.4	53.4	296.3	5.3	9.1	5.5	9.84	14.53	.438	7.00	.531	6.43	6.43	5.00	.594	7.33	7.33
16X 5X	.438/.594T	33.90	38.5	54.6	378.2	5.9	9.8	6.9	9.97	16.59	.438	6.00	.656	6.49	6.49	5.00	.531	7.31	7.31
14X 6X	.438/.656T	34.20	32.3	54.9	304.8	5.3	9.3	5.5	10.06	14.66	.438	6.00	.656	6.49	6.49	5.00	.531	7.31	7.31
16X 6X	.438/.531T	34.65	38.9	57.3	386.5	5.9	9.9	6.7	10.19	16.53	.438	6.00	.656	6.49	6.49	5.00	.531	7.31	7.31
16X 5X	.438/.656T	34.95	39.2	57.8	393.0	5.9	10.0	6.8	10.28	16.66	.438	6.00	.656	6.49	6.49	5.00	.531	7.31	7.31
14X 7X	.438/.594T	34.95	33.1	57.4	309.3	5.3	9.4	5.4	10.28	14.53	.438	6.00	.594	6.46	6.46	5.00	.531	7.31	7.31
14X 8X	.438/.531T	35.29	33.1	58.6	310.4	5.3	9.4	5.3	10.38	14.53	.438	6.00	.531	6.43	6.43	5.00	.594	7.33	7.33
16X 6X	.438/.594T	35.90	39.7	61.2	403.1	5.9	10.2	6.6	10.56	16.59	.438	6.00	.594	7.33	7.33	5.00	.719	7.39	7.39
16X 5X	.438/.719T	36.01	39.9	61.0	407.2	6.0	10.2	6.7	10.59	16.72	.438	6.00	.594	7.33	7.33	5.00	.719	7.39	7.39
16X 7X	.438/.531T	36.45	39.8	63.3	407.8	5.9	10.2	6.4	10.72	16.53	.438	6.00	.531	7.31	7.31	5.00	.531	7.31	7.31
14X 8X	.438/.594T	36.99	33.7	63.2	324.0	5.3	9.6	5.1	10.88	14.59	.438	6.00	.594	7.33	7.33	5.00	.531	7.31	7.31
14X 9X	.438/.531T	37.09	33.6	63.8	323.3	5.2	9.6	5.1	10.91	14.53	.438	6.00	.531	7.31	7.31	5.00	.531	7.31	7.31
16X 7X	.438/.594T	37.94	40.6	67.8	425.4	6.0	10.5	6.3	11.16	16.59	.438	6.00	.594	7.33	7.33	5.00	.531	7.31	7.31
16X 8X	.438/.531T	38.25	40.7	69.1	427.1	5.9	10.5	6.2	11.25	16.53	.438	6.00	.531	7.31	7.31	5.00	.531	7.31	7.31
16X 6X	.438/.719T	38.45	41.1	68.9	434.2	6.0	10.6	6.3	11.31	16.72	.438	6.00	.719	7.39	7.39	5.00	.531	7.31	7.31
16X 7X	.438/.656T	39.41	41.3	72.3	442.2	6.0	10.7	6.1	11.59	16.66	.438	6.00	.656	7.37	7.37	5.00	.531	7.31	7.31
16X 8X	.438/.594T	39.95	41.4	74.3	445.6	6.0	10.8	6.0	11.75	16.59	.438	6.00	.594	7.33	7.33	5.00	.531	7.31	7.31
16X 9X	.438/.531T	40.05	41.4	75.0	444.8	5.9	10.8	5.9	11.78	16.53	.438	6.00	.531	7.31	7.31	5.00	.531	7.31	7.31
16X 7X	.438/.719T	40.90	42.0	76.8	458.3	6.0	10.9	5.8	12.03	16.72	.438	6.00	.719	7.39	7.39	5.00	.531	7.31	7.31
16X 8X	.438/.656T	41.65	42.2	79.4	463.1	6.0	11.0	5.8	12.25	16.66	.438	6.00	.656	7.37	7.37	5.00	.531	7.31	7.31
18X 5X	.500/.656T	41.75	51.0	70.4	556.5	6.5	10.9	7.9	12.28	18.66	.500	5.00	.656	9.41	9.41	5.00	.594	7.33	7.33
16X 9X	.438/.594T	41.96	42.1	80.9	464.1	5.9	11.0	5.7	12.34	16.59	.438	6.00	.594	7.33	7.33	5.00	.531	7.31	7.31
16X 5X	.500/.875T	42.09	44.8	70.9	467.5	5.9	10.4	6.6	12.38	16.88	.500	5.00	.875	8.52	8.52	5.00	.531	7.31	7.31
18X 6X	.500/.594T	42.70	51.6	74.3	570.7	6.5	11.1	7.7	12.56	18.59	.500	6.00	.594	9.37	9.37	5.00	.531	7.31	7.31
18X 5X	.500/.719T	42.81	51.9	74.0	575.6	6.5	11.1	7.8	12.59	18.72	.500	6.00	.719	9.44	9.44	5.00	.531	7.31	7.31
14X 10X	.438/.656T	43.15	35.3	79.9	362.5	5.2	10.3	4.5	12.69	14.66	.438	10.00	.656	9.41	9.41	10.00	.594	7.33	7.33
16X 8X	.438/.719T	43.35	42.8	84.5	479.7	5.9	11.2	5.7	12.75	16.72	.438	8.00	.719	7.39	7.39	8.00	.594	7.33	7.33
16X 9X	.438/.656T	43.89	42.9	86.6	482.0	5.9	11.2	5.6	12.91	16.66	.438	9.00	.656	7.37	7.37	9.00	.594	7.33	7.33
18X 6X	.500/.656T	44.00	52.5	78.6	592.4	6.6	11.3	7.5	12.94	18.66	.500	6.00	.656	9.41	9.41	6.00	.594	7.33	7.33
14X 11X	.438/.594T	44.36	42.8	87.5	481.0	5.9	11.2	5.5	12.94	16.59	.438	10.00	.594	7.33	7.33	10.00	.594	7.33	7.33
16X 9X	.438/.719T	45.80	43.5	92.4	499.1	5.9	11.5	5.4	13.34	14.66	.438	11.00	.719	7.39	7.39	11.00	.594	7.33	7.33
16X 10X	.438/.656T	46.10	43.5	93.7	499.2	5.9	11.5	5.3	13.56	16.66	.438	10.00	.656	7.37	7.37	10.00	.594	7.33	7.33
18X 7X	.500/.719T	47.70	54.8	91.7	647.2	6.6	11.8	7.1	14.03	18.72	.500	7.00	.719	9.44	9.44	7.00	.594	7.33	7.33
18X 6X	.500/.875T	48.45	55.5	93.4	662.5	6.6	11.9	7.1	14.25	18.88	.500	6.00	.875	9.52	9.52	6.00	.594	7.33	7.33
18X 8X	.500/.719T	50.15	55.9	100.5	678.0	6.6	12.1	6.7	14.75	18.72	.500	8.00	.719	9.44	9.44	8.00	.594	7.33	7.33
18X 9X	.500/.656T	50.49	56.0	102.8	682.0	6.6	12.2	6.6	14.91	18.66	.500	9.00	.656	9.41	9.41	9.00	.594	7.33	7.33
18X 10X	.500/.594T	50.80	55.9	103.7	680.9	6.6	12.2	6.6	14.94	18.59	.500	10.00	.594	9.37	9.37	10.00	.594	7.33	7.33
18X 7X	.500/.875T	51.44	56.8	103.8	699.0	6.6	12.3	6.7	15.13	18.88	.500	7.00	.875	9.52	9.52	7.00	.594	7.33	7.33
18X 9X	.500/.719T	52.60	56.9	109.1	706.0	6.6	12.4	6.5	15.47	18.72	.500	9.00	.719	9.44	9.44	9.00	.594	7.33	7.33
18X 10X	.500/.656T	52.90	56.9	110.6	706.9	6.6	12.4	6.4	15.56	18.66	.500	10.00	.656	9.41	9.41	10.00	.594	7.33	7.33
18X 8X	.500/.719T	54.40	57.9	114.3	731.9	6.6	12.6	6.4	16.00	18.88	.500	8.00	.719	9.44	9.44	8.00	.594	7.33	7.33
18X 11X	.500/.656T	55.15	57.7	118.6	730.1	6.5	12.7	6.2	16.22	18.66	.500	11.00	.656	9.41	9.41	11.00	.594	7.33	7.33
18X 11X	.500/.719T	57.49	58.5	126.5	755.4	6.5	12.9	6.0	16.91	18.72	.500	11.00	.719	9.44	9.44	11.00	.594	7.33	7.33

0.1563 - 5/32 in.

-.156 IN. PLATE (AREA= .83 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	THICK	AREA								
18X12X	.500/.719T	59.94	59.2	135.1	777.2	6.5	13.1	5.8	17.63	18.72	.500	12.00	.719	.500	9.44								
18X10X	.500/.875T	60.35	59.7	134.9	788.2	6.5	13.2	5.8	17.75	18.88	.500	10.00	.875	.500	9.52								
21X 8X	.625/.875T	68.44	86.0	146.5	1193.8	7.5	13.9	8.1	20.13	21.88	.625	8.00	.875	.625	13.77								
21X10X	.625/.750T	78.14	86.6	154.6	1215.6	7.5	14.0	7.9	20.63	21.75	.625	10.00	.750	.625	13.69								
21X 9X	.625/.875T	71.40	87.6	158.7	1243.7	7.5	14.2	7.8	21.00	21.88	.625	9.00	.875	.625	13.77								
21X11X	.625/.750T	72.69	87.8	155.3	1256.4	7.5	14.3	7.6	21.38	21.75	.625	11.00	.750	.625	13.69								
21X10X	.625/.875T	74.39	89.0	170.9	1290.1	7.5	14.5	7.5	21.88	21.88	.625	10.00	.875	.625	13.77								
21X 9X	.625/1.125T	79.05	91.9	187.0	1373.0	7.6	14.9	7.3	23.25	22.13	.625	9.00	1.125	.625	13.93								
21X12X	.625/.875T	80.34	91.5	194.8	1372.0	7.5	15.0	7.0	23.63	21.88	.625	12.00	.875	.625	13.77								
24X 9X	.688/.875T	82.89	116.7	194.4	1825.3	8.5	15.6	9.4	24.38	24.88	.688	9.00	.875	.688	17.22								
21X13X	.625/.875T	83.30	92.6	206.8	1409.1	7.5	15.2	6.8	24.50	21.88	.625	13.00	.875	.625	13.77								
24X10X	.688/.875T	85.85	118.7	208.2	1893.1	8.5	15.9	9.1	25.25	24.88	.688	10.00	.875	.688	17.22								
21X14X	.625/.875T	86.29	93.5	218.6	1443.4	7.4	15.4	6.6	25.38	21.88	.625	14.00	.875	.625	13.77								
24X 8X	.688/1.125T	86.70	120.2	209.4	1931.2	8.6	16.1	9.2	25.50	25.13	.688	8.00	1.125	.688	17.40								
24X11X	.688/.875T	88.84	120.6	222.0	1956.4	8.5	16.2	8.8	26.13	24.88	.688	11.00	.875	.688	17.22								
24X 9X	.688/1.125T	90.54	122.5	227.1	2012.2	8.6	16.4	8.9	26.63	25.13	.688	9.00	1.125	.688	17.40								
24X12X	.688/.875T	91.80	122.2	235.9	2015.9	8.5	16.5	8.5	27.00	24.88	.688	12.00	.875	.688	17.22								
24X13X	.688/.875T	94.79	123.8	249.7	2071.8	8.5	16.7	8.3	27.88	24.88	.688	13.00	.875	.688	17.22								
24X11X	.688/1.125T	98.19	126.4	261.6	2155.4	8.5	17.0	8.2	28.88	25.13	.688	11.00	1.125	.688	17.40								
27X 8X	.750/1.125T	99.45	156.6	252.2	2722.3	9.5	17.5	10.8	29.25	28.13	.750	8.00	1.125	.750	21.21								
27X11X	.750/.875T	101.59	156.4	266.1	2761.9	9.5	17.7	10.4	29.88	27.88	.750	11.00	.875	.750	21.03								
27X 9X	.750/1.125T	103.29	158.8	272.0	2835.9	9.5	17.9	10.4	30.38	28.13	.750	9.00	1.125	.750	21.21								
27X12X	.750/.875T	104.55	158.7	281.7	2846.1	9.5	17.9	10.1	30.75	27.88	.750	12.00	.875	.750	21.83								
27X10X	.750/1.125T	107.10	161.6	291.6	2941.5	9.5	18.2	10.1	31.50	28.13	.750	10.00	1.125	.750	21.21								
27X11X	.750/1.125T	110.94	164.2	311.2	3040.0	9.5	18.5	9.8	32.63	28.13	.750	11.00	1.125	.750	21.21								
27X 9X	.875/1.375T	122.40	184.8	321.5	3348.4	9.5	18.1	10.4	36.00	28.38	.875	9.00	1.375	.875	24.97								
30X10X	.875/1.375T	136.00	225.2	397.4	4532.5	10.5	20.1	11.4	40.00	31.38	.875	10.00	1.375	.875	27.59								
30X13X	.875/1.125T	136.99	226.0	418.6	4592.1	10.5	20.3	11.0	40.88	31.13	.875	13.00	1.125	.875	27.38								
30X11X	.875/1.375T	140.69	228.8	423.6	4685.3	10.5	20.5	11.1	41.38	31.38	.875	11.00	1.375	.875	27.59								
30X14X	.875/1.125T	142.80	228.8	440.4	4710.9	10.5	20.6	10.7	42.00	31.38	.875	14.00	1.125	.875	27.38								
30X14X	.875/1.375T	154.70	237.8	502.5	5089.7	10.5	21.4	10.1	45.50	31.38	.875	14.00	1.375	.875	27.59								
33X10X1.000/1.500T		163.20	298.1	497.6	6460.2	11.5	21.7	13.0	48.00	34.50	1.000	10.00	1.500	1.500	34.66								
33X11X1.000/1.375T		163.64	297.7	502.3	6455.4	11.5	21.7	12.9	48.13	34.38	1.000	11.00	1.375	1.375	34.54								
36X13X1.000/1.125T		172.14	342.4	559.9	7921.9	12.4	23.1	14.1	50.63	37.13	1.000	13.00	1.125	1.125	37.29								
33X13X1.000/1.375T		172.99	306.3	560.6	6840.8	11.5	22.3	12.2	50.88	34.38	1.000	13.00	1.375	1.375	34.54								
36X11X1.000/1.375T		173.84	346.0	566.9	8065.2	12.5	23.3	14.2	51.13	37.38	1.000	11.00	1.375	1.375	37.54								
36X10X1.000/1.750T		181.90	357.7	614.2	8568.6	12.6	24.0	14.0	53.50	37.75	1.000	18.00	1.750	1.750	37.91								
33X16X1.000/1.375T		187.00	316.9	647.4	7347.9	11.5	23.2	11.3	55.00	34.38	1.000	16.00	1.375	1.375	36.54								

0.1563 - 5/32 in.



0.1875 - 3/16 in.

188 IN. PLATE (AREA= 1.20 SQ.IN.)

SECTION MODULUS										DIMENSIONS				SHEAR AREA	
NOMINAL SIZE		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	AREA	
7X 7X	.250/ .438T	16.35	11.6	20.5	56.7	3.1	4.9	2.8	4.81	7.44	.250	7.00	.438	1.91	
10X 4X	.313/ .438T	16.59	18.1	20.9	103.2	4.1	5.7	4.9	4.88	10.44	.313	4.00	.438	3.33	
9X 6X	.250/ .438T	16.59	15.6	23.9	91.1	3.9	5.8	3.8	4.88	9.44	.250	6.00	.438	2.41	
10X 5X	.313/ .375T	17.00	18.3	22.0	105.5	4.1	5.8	4.8	5.00	10.38	.313	5.00	.375	3.31	
8X 7X	.250/ .438T	17.20	13.7	23.7	74.9	3.5	5.5	3.2	5.06	8.44	.250	7.00	.438	2.16	
10X 4X	.313/ .500T	17.44	18.5	22.7	109.2	4.2	5.9	4.8	5.13	10.50	.313	4.00	.500	3.35	
9X 7X	.250/ .438T	18.05	15.9	27.0	96.3	3.8	6.1	3.6	5.31	9.44	.250	7.00	.438	2.41	
10X 6X	.313/ .375T	18.29	18.7	24.9	112.9	4.1	6.0	4.5	5.38	10.38	.313	6.00	.375	3.31	
10X 5X	.313/ .500T	19.14	19.1	26.6	118.7	4.2	6.2	4.5	5.63	10.50	.313	5.00	.500	3.35	
10X 6X	.313/ .438T	19.55	19.1	27.7	120.2	4.2	6.3	4.3	5.75	10.44	.313	6.00	.438	3.33	
10X 5X	.313/ .563T	20.20	19.5	28.8	124.8	4.2	6.4	4.3	5.94	10.56	.313	5.00	.563	3.36	
10X 6X	.313/ .500T	20.84	19.5	30.4	127.1	4.2	6.5	4.2	6.13	10.50	.313	6.00	.500	3.35	
10X 7X	.313/ .438T	21.05	19.5	31.0	127.2	4.2	6.5	4.1	6.19	10.44	.313	7.00	.438	3.33	
9X 7X	.313/ .500T	21.45	17.3	30.3	106.6	3.8	6.2	3.5	6.31	9.50	.313	7.00	.500	3.03	
12X 4X	.375/ .469T	21.69	24.9	28.6	168.7	4.7	6.8	5.9	6.38	12.47	.375	4.00	.469	4.75	
10X 6X	.313/ .563T	22.10	19.9	33.0	133.4	4.2	6.7	4.0	6.50	10.56	.313	6.00	.563	3.36	
10X 7X	.313/ .500T	22.54	19.9	34.1	134.2	4.1	6.8	3.9	6.63	10.50	.313	7.00	.500	3.35	
12X 4X	.375/ .531T	22.95	17.6	33.1	112.0	3.8	7.0	5.8	6.63	12.53	.375	4.00	.531	4.77	
9X 8X	.313/ .500T	23.15	17.5	33.7	111.7	3.7	6.4	3.4	6.75	9.56	.313	7.00	.500	3.05	
12X 5X	.375/ .469T	23.26	25.7	32.9	182.9	4.8	7.1	5.6	6.84	12.47	.375	5.00	.469	4.75	
12X 4X	.375/ .594T	23.39	26.0	32.9	185.4	4.8	7.1	5.6	6.88	12.59	.375	4.00	.594	4.79	
10X 7X	.313/ .563T	24.00	20.2	37.2	140.7	4.1	7.0	3.8	7.06	10.56	.313	7.00	.563	3.36	
10X 8X	.313/ .500T	24.24	20.2	38.0	140.7	4.1	7.0	3.7	7.13	10.50	.313	8.00	.500	3.35	
12X 4X	.375/ .656T	24.24	26.4	34.9	193.1	4.8	7.3	5.5	7.13	12.66	.375	4.00	.656	4.82	
9X 8X	.313/ .563T	24.85	17.8	36.8	117.0	3.7	6.6	3.2	7.31	9.56	.313	8.00	.563	3.05	
12X 5X	.375/ .469T	24.85	26.4	37.1	195.4	4.8	7.4	5.3	7.31	12.47	.375	6.00	.469	4.75	
12X 5X	.375/ .594T	25.40	26.8	38.1	201.1	4.8	7.5	5.3	7.47	12.59	.375	5.00	.594	4.79	
10X 8X	.313/ .563T	25.94	20.5	41.5	147.3	4.1	7.2	3.6	7.63	10.56	.313	8.00	.563	3.36	
12X 5X	.375/ .656T	26.45	27.3	40.7	209.7	4.8	7.7	5.2	7.78	12.66	.375	5.00	.656	4.82	
12X 6X	.375/ .594T	26.45	27.0	41.3	206.7	4.8	7.7	5.0	7.78	12.47	.375	7.00	.594	4.79	
12X 6X	.375/ .594T	27.40	27.5	43.4	214.9	4.8	7.8	5.0	8.06	12.59	.375	6.00	.594	4.79	
12X 7X	.375/ .531T	27.95	27.5	45.0	217.3	4.8	7.9	4.8	8.22	12.53	.375	7.00	.531	4.77	
12X 6X	.375/ .656T	28.70	27.9	46.3	223.8	4.8	8.0	4.8	8.44	12.66	.375	6.00	.656	4.82	
12X 7X	.375/ .594T	29.44	28.0	48.6	227.0	4.8	8.1	4.7	8.66	12.59	.375	7.00	.594	4.79	
12X 8X	.375/ .531T	29.75	28.0	49.6	227.6	4.8	8.1	4.6	8.75	12.53	.375	8.00	.531	4.77	
14X 5X	.438/ .531T	29.85	34.9	44.8	288.8	5.4	8.3	6.4	8.78	14.53	.438	5.00	.531	6.45	
14X 5X	.438/ .594T	30.91	35.6	47.8	301.4	5.4	8.5	6.3	9.09	14.59	.438	5.00	.594	6.47	
12X 8X	.375/ .594T	31.45	28.5	53.7	237.8	4.8	8.4	4.4	9.25	12.59	.375	8.00	.594	4.79	
12X 9X	.375/ .531T	31.55	28.4	54.3	237.2	4.8	8.4	4.4	9.28	12.53	.375	9.00	.531	4.77	
14X 6X	.438/ .531T	31.65	35.9	50.3	308.1	5.4	8.6	6.1	9.31	14.53	.438	6.00	.531	6.45	
14X 5X	.438/ .656T	31.99	36.2	50.7	313.7	5.4	8.7	6.2	9.41	14.66	.438	5.00	.656	6.50	
16X 5X	.438/ .531T	32.84	42.4	53.4	395.3	6.0	9.3	7.4	9.66	16.53	.438	5.00	.531	7.32	
14X 6X	.438/ .594T	32.95	36.6	53.8	321.7	5.4	8.8	6.0	9.69	14.59	.438	6.00	.594	6.47	
14X 5X	.438/ .719T	33.05	36.8	53.6	325.4	5.5	8.8	6.1	9.72	14.72	.438	5.00	.719	6.53	

0.1875 - 3/16 in.



.188 IN. PLATE (AREA= 1.20 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****				SHEAR AREA
		ZPL	ZFL	INERTIA				DEPTH	THICK	WIDTH	FLANGE THICK	
12X 8X .375/.656T	33.15	28.9	57.7	247.4	4.8	8.6	4.3	9.75	.375	8.00	.656	6.45
14X 7X .438/.531T	33.46	36.7	55.7	325.6	5.4	8.9	5.8	9.84	.438	7.00	.531	7.35
16X 5X .438/.594T	33.90	43.2	56.8	412.0	6.1	9.5	7.3	9.97	.438	5.00	.594	6.50
14X 6X .438/.656T	34.20	37.2	57.3	335.0	5.5	9.0	5.8	10.06	.438	6.00	.656	7.32
16X 6X .438/.531T	34.65	43.6	59.6	421.2	6.1	9.7	7.1	10.19	.438	6.00	.531	7.38
16X 5X .438/.656T	34.95	44.0	60.1	428.2	6.1	9.7	7.1	10.28	.438	5.00	.656	6.47
14X 7X .438/.594T	34.95	37.4	59.8	340.0	5.4	9.1	5.7	10.28	.438	7.00	.594	6.45
14X 8X .438/.531T	35.29	37.4	61.1	341.4	5.4	9.1	5.6	10.38	.438	8.00	.531	7.35
16X 6X .438/.594T	35.90	44.5	63.7	439.4	6.1	9.9	6.9	10.56	.438	6.00	.594	7.41
16X 5X .438/.719T	36.01	44.7	63.5	443.8	6.1	9.9	7.0	10.59	.438	5.00	.719	7.32
16X 7X .438/.531T	36.45	44.7	65.8	444.7	6.1	10.0	6.8	10.72	.438	7.00	.531	6.47
14X 8X .438/.594T	36.99	38.1	65.8	356.5	5.4	9.4	5.4	10.88	.438	8.00	.594	6.45
14X 9X .438/.531T	37.09	38.0	66.4	355.8	5.4	9.4	5.4	10.91	.438	9.00	.531	7.35
16X 7X .438/.594T	37.94	45.5	70.5	464.0	6.1	10.2	6.5	11.25	.438	7.00	.594	7.41
16X 8X .438/.531T	38.25	45.5	71.8	466.0	6.1	10.2	6.5	11.31	.438	8.00	.531	7.38
16X 6X .438/.719T	38.45	46.0	71.7	473.6	6.2	10.3	6.6	11.31	.438	6.00	.719	7.41
16X 7X .438/.656T	39.41	46.3	75.1	482.6	6.1	10.4	6.4	11.59	.438	7.00	.656	7.38
16X 8X .438/.594T	39.95	46.4	77.2	486.4	6.1	10.5	6.3	11.75	.438	8.00	.594	7.35
16X 9X .438/.531T	40.05	46.3	77.9	485.6	6.1	10.5	6.2	11.78	.438	9.00	.531	7.32
16X 7X .438/.719T	40.90	47.0	79.8	500.3	6.2	10.6	6.3	12.03	.438	7.00	.719	7.41
16X 8X .438/.656T	41.65	47.2	82.5	505.8	6.1	10.7	6.1	12.25	.438	8.00	.656	7.38
18X 5X .500/.656T	41.75	56.2	73.0	598.6	6.7	10.6	8.2	12.28	.500	5.00	.656	9.42
16X 9X .438/.594T	41.96	47.2	84.0	506.9	6.1	10.7	6.0	12.34	.438	9.00	.594	7.35
16X 5X .500/.875T	42.09	49.6	73.6	506.0	6.1	10.2	6.9	12.38	.500	5.00	.875	8.53
18X 6X .500/.594T	42.70	56.8	77.0	614.0	6.7	10.8	8.0	12.56	.500	6.00	.594	9.39
18X 5X .500/.719T	42.81	57.1	76.7	619.2	6.7	10.8	8.1	12.59	.500	5.00	.719	9.45
14X10X .438/.656T	43.15	39.8	83.2	399.8	5.4	10.0	4.8	12.69	.438	10.00	.656	6.58
16X 8X .438/.719T	43.35	47.9	87.8	524.0	6.1	10.9	6.0	12.75	.438	8.00	.719	7.41
16X 9X .438/.656T	43.89	47.9	89.9	526.7	6.1	11.0	5.9	12.91	.438	9.00	.656	7.38
18X 6X .500/.656T	44.00	57.8	91.4	637.3	6.7	11.0	7.8	12.94	.500	6.00	.656	9.42
16X10X .438/.594T	44.00	47.8	90.9	525.8	6.1	11.0	5.8	12.94	.438	10.00	.594	7.35
14X11X .438/.656T	45.36	40.3	89.4	412.2	5.3	10.2	4.6	13.34	.438	11.00	.656	6.50
16X 9X .438/.719T	45.80	48.6	96.0	545.7	6.1	11.2	5.7	13.47	.438	9.00	.719	7.41
16X10X .438/.556T	46.10	48.6	97.3	546.0	6.1	11.2	5.6	13.56	.438	10.00	.556	7.38
18X 7X .500/.719T	47.70	60.2	95.0	696.7	6.8	11.6	7.3	14.03	.500	7.00	.719	9.45
18X 6X .500/.875T	48.45	61.0	96.7	713.1	6.8	11.7	7.4	14.25	.500	6.00	.875	9.53
18X 8X .500/.719T	50.15	61.5	103.9	730.2	6.8	11.9	7.8	14.75	.500	8.00	.719	9.45
18X 9X .500/.656T	50.69	61.5	106.3	734.6	6.8	11.9	6.9	14.91	.500	9.00	.656	9.42
18X10X .500/.594T	50.80	61.4	107.3	733.6	6.7	11.9	6.8	14.94	.500	10.00	.594	9.39
18X 7X .500/.875T	51.44	62.4	107.5	752.7	6.8	12.1	7.0	15.13	.500	7.00	.875	9.53
18X 9X .500/.719T	52.60	62.5	112.8	760.6	6.8	12.2	6.7	15.47	.500	9.00	.719	9.45
18X10X .500/.656T	52.90	62.5	114.4	761.8	6.7	12.2	6.7	15.56	.500	10.00	.656	9.42
18X 8X .500/.875T	54.40	63.6	118.2	788.6	6.8	12.4	6.7	16.00	.500	8.00	.875	9.53
18X11X .500/.656T	55.15	63.3	122.6	787.1	6.7	12.4	6.4	16.22	.500	11.00	.656	9.42
18X11X .500/.719T	57.49	64.3	130.8	814.7	6.7	12.7	6.2	16.91	.500	11.00	.719	9.45

0.1875 - 3/16 in.

0.188 IN. PLATE (AREA= 1.20 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	FLANGE THICK	
18X12X .500/.719T	59.94	65.0	139.6	838.5	6.7	12.9	6.0	17.63	18.72	.500	12.00	.719	9.45
18X10X .500/.875T	60.35	65.6	139.4	850.2	6.7	13.0	6.1	17.75	18.88	.500	10.00	.875	9.53
21X 8X .625/.875T	68.44	92.3	150.6	1282.7	7.7	13.7	8.4	20.13	21.88	.625	8.00	.875	13.79
21X10X .625/.750T	70.14	92.9	158.8	1286.1	7.7	13.8	8.1	20.63	21.75	.625	10.00	.750	13.71
21X 9X .625/.875T	71.40	94.0	163.0	1315.8	7.7	14.0	8.1	21.00	21.88	.625	9.00	.875	13.79
21X11X .625/.750T	72.69	94.3	169.7	1329.6	7.7	14.1	7.8	21.38	21.75	.625	11.00	.750	13.71
21X10X .625/.875T	74.39	95.5	175.6	1365.1	7.7	14.3	7.8	21.88	21.88	.625	10.00	.875	13.79
21X 9X .625/1.125T	79.05	98.5	192.1	1453.0	7.7	14.8	7.6	23.25	22.13	.625	9.00	1.125	13.95
21X12X .625/.875T	80.34	98.1	200.0	1452.5	7.6	14.8	7.3	23.63	21.88	.625	12.00	.875	13.79
24X 9X .688/.875T	82.89	123.8	199.0	1913.0	8.6	15.5	9.6	24.38	24.88	.688	9.00	.875	17.25
21X13X .625/.875T	83.30	99.2	212.3	1892.1	7.6	15.0	7.0	24.50	21.88	.625	13.00	.875	13.79
24X10X .688/.875T	85.85	125.9	213.1	1984.2	8.7	15.8	9.3	25.25	24.88	.688	10.00	.875	17.25
21X14X .625/.875T	86.29	100.2	224.4	1528.7	7.6	15.3	6.8	25.38	21.88	.625	14.00	.875	13.79
24X 8X .688/1.125T	86.70	127.5	214.4	2023.8	8.7	15.9	9.4	25.50	25.13	.688	8.00	1.125	17.42
24X11X .688/.875T	88.84	127.9	227.1	2050.8	8.7	16.0	9.0	26.13	24.88	.688	11.00	.875	17.25
24X 9X .688/1.125T	90.54	129.8	232.4	2109.0	8.7	16.2	9.1	26.63	25.13	.688	9.00	1.125	17.42
24X12X .688/.875T	91.80	129.6	241.3	2113.5	8.7	16.3	8.8	27.00	24.88	.688	12.00	.875	17.25
24X13X .688/.875T	94.79	131.2	255.4	2172.4	8.6	16.6	8.5	27.88	24.88	.688	13.00	.875	17.25
24X11X .688/1.125T	98.19	133.9	267.6	2259.8	8.7	16.9	8.4	28.88	25.13	.688	11.00	1.125	21.24
27X 8X .750/1.125T	99.45	163.6	257.4	2832.2	9.6	17.3	11.0	29.25	28.13	.750	8.00	1.125	21.24
27X11X .750/.875T	101.59	164.4	271.5	2874.0	9.6	17.5	10.6	29.88	27.88	.750	11.00	.875	21.05
27X 9X .750/1.125T	103.29	166.8	277.5	2950.6	9.7	17.7	10.6	30.38	27.88	.750	9.00	1.125	21.24
27X12X .750/.875T	104.55	166.8	287.4	2981.7	9.6	17.8	10.3	30.75	27.88	.750	12.00	.875	21.05
27X10X .750/1.125T	107.10	169.8	297.4	3060.6	9.7	18.0	10.3	31.50	28.13	.750	10.00	1.125	21.24
27X11X .750/1.125T	110.94	172.4	317.3	3163.3	9.7	18.3	10.0	32.63	28.13	.750	11.00	1.125	21.24
27X 9X .875/1.375T	122.40	192.9	327.2	3466.6	9.7	18.0	10.6	36.00	28.38	.875	9.00	1.375	25.00
30X10X .875/1.375T	136.00	234.1	403.9	4678.6	10.7	20.0	11.6	40.00	31.38	.875	10.00	1.375	27.62
30X13X .875/1.125T	138.99	235.0	425.3	4740.9	10.6	20.2	11.1	40.88	31.13	.875	13.00	1.125	27.40
30X11X .875/1.375T	140.69	237.9	430.5	4836.5	10.7	20.3	11.2	41.38	31.38	.875	11.00	1.375	27.62
30X14X .875/1.125T	142.80	237.9	447.5	4863.8	10.6	20.4	10.9	42.00	31.13	.875	14.00	1.125	27.40
30X14X .875/1.375T	154.70	247.1	510.4	5255.1	10.6	21.3	10.3	45.50	31.38	.875	14.00	1.375	27.62
33X10X1.000/1.500T	163.20	307.7	509.4	6629.8	11.6	21.5	13.1	48.00	34.50	1.000	10.00	1.500	34.69
33X11X1.000/1.375T	163.64	307.4	504.9	6625.2	11.6	21.6	13.0	48.13	34.38	1.000	11.00	1.375	34.57
36X13X1.000/1.125T	172.14	352.7	567.1	8115.4	12.5	23.0	14.3	50.63	37.13	1.000	13.00	1.125	37.32
33X13X1.000/1.375T	172.99	316.1	568.1	7021.0	11.6	22.2	12.4	50.88	34.38	1.000	13.00	1.375	34.57
36X11X1.000/1.375T	173.84	356.4	574.1	8261.5	12.6	23.2	14.4	51.13	37.38	1.000	11.00	1.375	37.57
36X10X1.000/1.500T	181.90	368.3	622.0	8776.0	12.7	23.8	14.1	53.50	37.75	1.000	10.00	1.500	37.94
33X16X1.000/1.375T	187.00	327.0	655.9	7542.2	11.6	23.1	11.5	55.00	34.38	1.000	16.00	1.375	34.57

0.1875 - 3/16 in.



.219 IN. PLATE (AREA= 1.63 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	Yp	Vf	***** BEAM DIMENSIONS *****				SHEAR AREA		
	Wt/Ft	ZPL	ZFL				INERTIA	AREA	DEPTH	WEB THICK		FLANGE WIDTH	FLANGE THICK
3X 2X .125/.188T	2.55	4.4	1.5	3.8	1.3	.9	2.5	.75	3.19	.125	2.00	.188	.43
4X 2X .125/.188T	2.99	5.8	2.1	6.8	1.6	1.2	3.2	.88	4.19	.125	2.00	.188	.55
3X 3X .125/.188T	3.20	4.6	2.1	4.8	1.4	1.1	2.4	.94	3.19	.125	3.00	.188	.43
4X 3X .125/.188T	3.60	6.1	2.8	8.5	1.8	1.4	3.0	1.06	4.19	.125	3.00	.188	.55
4X 2X .188/.313T	4.69	6.4	3.2	9.7	1.8	1.5	3.0	1.38	4.31	.188	2.00	.313	.85
5X 2X .188/.250T	4.90	7.8	3.7	13.7	2.1	1.8	3.7	1.44	5.25	.188	2.00	.250	1.03
3X 3X .188/.313T	5.10	5.0	3.2	6.9	1.5	1.4	2.1	1.50	3.31	.188	3.00	.313	.66
5X 2X .188/.313T	5.30	8.0	4.2	15.3	2.2	1.9	3.6	1.56	5.31	.188	2.00	.313	1.04
6X 2X .188/.313T	5.95	9.8	5.3	22.6	2.6	2.4	4.2	1.75	6.31	.188	2.00	.313	1.23
6X 3X .188/.250T	6.39	10.0	6.1	24.4	2.6	2.4	4.0	1.88	6.25	.188	3.00	.250	1.22
5X 4X .188/.250T	6.60	8.5	6.0	19.2	2.3	2.3	3.2	1.94	5.25	.188	4.00	.250	1.03
4X 4X .188/.313T	6.80	6.9	5.6	13.9	2.0	2.0	2.5	2.00	4.31	.188	4.00	.313	.85
6X 3X .188/.313T	7.00	10.3	7.0	27.2	2.7	2.6	3.9	2.06	6.31	.188	3.00	.313	1.23
6X 4X .188/.250T	7.24	10.3	7.4	28.0	2.7	2.7	3.8	2.13	6.25	.188	4.00	.250	1.22
5X 4X .188/.313T	7.45	8.7	7.1	21.6	2.4	2.5	3.1	2.19	5.31	.188	4.00	.313	1.04
6X 4X .188/.313T	8.09	10.6	8.7	31.3	2.8	2.9	3.6	2.38	6.31	.188	4.00	.313	1.23
5X 5X .188/.313T	8.50	8.9	8.5	24.1	2.4	2.7	2.8	2.50	5.31	.188	5.00	.313	1.04
7X 3X .250/.313T	9.15	12.5	9.0	39.5	3.0	3.2	4.4	2.69	7.31	.250	3.00	.313	1.88
6X 3X .250/.438T	9.55	11.1	9.3	33.7	2.8	3.0	3.6	2.81	6.44	.250	3.00	.438	1.66
7X 3X .250/.375T	9.79	12.9	10.1	43.0	3.1	3.3	4.3	2.88	7.38	.250	3.00	.375	1.90
8X 3X .250/.313T	10.08	14.6	10.7	52.7	3.4	3.6	4.9	2.94	8.31	.250	3.00	.313	2.13
7X 4X .250/.313T	10.20	13.0	10.9	44.7	3.1	3.4	4.1	3.00	7.31	.250	4.00	.313	1.88
8X 3X .250/.438T	10.48	13.2	11.1	46.2	3.1	3.5	4.2	3.06	7.44	.250	3.00	.438	1.91
8X 3X .250/.375T	10.64	15.0	11.9	57.1	3.5	3.8	4.8	3.13	8.38	.250	3.00	.375	2.15
9X 3X .250/.313T	10.85	16.7	12.5	68.0	3.8	4.1	5.5	3.19	9.31	.250	3.00	.313	2.38
8X 4X .250/.313T	11.05	15.2	12.9	59.4	3.5	3.9	4.6	3.25	8.31	.250	4.00	.313	2.13
7X 5X .250/.313T	11.25	13.4	12.8	49.2	3.2	3.7	3.8	3.31	7.31	.250	5.00	.313	1.88
8X 3X .250/.438T	11.49	15.4	13.1	61.3	3.5	4.0	4.7	3.31	8.44	.250	3.00	.438	2.16
9X 3X .250/.313T	11.90	17.2	13.8	73.5	3.9	4.3	5.3	3.38	9.38	.250	3.00	.375	2.40
9X 4X .250/.313T	12.18	17.6	15.2	78.7	3.9	4.5	5.2	3.56	9.44	.250	4.00	.313	2.38
8X 5X .250/.313T	12.10	15.6	15.0	65.1	3.5	4.2	4.4	3.56	8.31	.250	5.00	.313	2.13
9X 4X .250/.375T	12.75	17.9	16.7	82.8	3.9	4.6	5.0	3.75	9.38	.250	4.00	.375	2.40
9X 5X .250/.313T	12.95	17.9	17.2	83.7	3.9	4.7	4.9	3.81	9.31	.250	5.00	.313	2.38
8X 5X .250/.375T	13.19	16.0	17.0	70.9	3.6	4.4	4.2	3.88	8.38	.250	5.00	.375	2.15
9X 4X .250/.438T	13.40	18.3	16.4	88.6	4.0	4.8	4.8	4.00	9.44	.250	4.00	.438	2.41
9X 5X .250/.375T	14.04	18.4	19.5	90.7	4.0	4.9	4.7	4.13	9.38	.250	5.00	.375	2.40
8X 5X .250/.438T	14.25	16.3	19.0	76.0	3.6	4.7	4.0	4.19	8.44	.250	5.00	.438	2.16
9X 6X .250/.375T	14.45	16.3	19.5	76.5	3.6	4.7	3.9	4.25	8.38	.250	6.00	.375	2.15
7X 6X .250/.438T	14.89	14.2	18.9	62.2	3.2	4.4	3.3	4.38	7.44	.250	6.00	.438	1.91
9X 5X .250/.438T	15.10	18.8	21.8	97.3	4.0	5.2	4.5	4.44	9.44	.250	5.00	.438	2.41
9X 6X .250/.375T	15.30	18.7	22.3	97.6	4.0	5.2	4.4	4.50	9.38	.250	6.00	.375	2.40
10X 4X .313/.375T	15.74	21.2	19.9	108.8	4.2	5.1	5.5	4.63	10.38	.313	4.00	.375	3.32
8X 6X .250/.438T	15.74	16.6	21.9	81.8	3.6	4.9	3.7	4.63	8.44	.250	6.00	.438	2.16

0.2188 - 7/32 in.

•219 IN. PLATE (AREA= 1.63 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		YF		AREA		DEPTH		THICK		WIDTH		FLANGE		SHEAR	
7X 7X	.250/ .438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	MEB	WIDTH	FLANGE	THICK	AREA	THICK	FLANGE	THICK	AREA	THICK
7X 7X	.250/ .438T	16.35	14.4	21.4	66.1	3.2	4.6	3.1	4.01	7.44	.250		7.00		.438	1.91				1.91	
10X 4X	.313/ .438T	16.59	21.7	21.0	116.1	4.2	5.3	5.3	4.00	10.44	.313		4.00		.438	3.34				3.34	
9X 6X	.250/ .438T	16.59	19.1	25.0	104.6	4.0	5.5	4.2	4.00	9.44	.250		6.00		.438	2.41				2.41	
10X 5X	.313/ .375T	17.00	23.0	23.0	118.8	4.2	5.4	5.2	5.00	10.38	.313		5.00		.375	3.32				3.32	
8X 7X	.250/ .438T	17.20	16.9	24.7	86.8	3.6	5.1	3.5	5.06	8.44	.250		7.00		.438	2.16				2.16	
10X 4X	.313/ .500T	17.44	22.2	23.8	123.0	4.3	5.5	5.2	5.13	10.50	.313		4.00		.500	3.35				3.35	
9X 7X	.250/ .438T	18.05	19.4	28.2	111.0	4.0	5.7	3.9	5.31	9.44	.250		7.00		.438	2.41				2.41	
10X 6X	.313/ .375T	18.29	22.4	26.0	127.5	4.3	5.7	4.9	5.38	10.38	.313		6.00		.375	3.32				3.32	
10X 5X	.313/ .500T	19.14	22.8	27.8	134.3	4.3	5.9	4.8	5.63	10.50	.313		5.00		.500	3.35				3.35	
10X 6X	.313/ .438T	19.55	22.9	28.9	136.1	4.3	5.9	4.7	5.75	10.44	.313		6.00		.438	3.34				3.34	
10X 5X	.313/ .563T	20.20	23.2	30.1	141.4	4.3	6.1	4.7	5.94	10.56	.313		5.00		.563	3.37				3.37	
10X 6X	.313/ .500T	20.84	23.3	31.7	144.2	4.3	6.2	4.5	6.13	10.50	.313		6.00		.500	3.35				3.35	
10X 7X	.313/ .438T	21.05	23.3	32.4	144.4	4.3	6.2	4.5	6.19	10.44	.313		7.00		.438	3.34				3.34	
9X 7X	.313/ .500T	21.45	20.8	31.7	122.0	3.9	5.9	3.9	6.31	9.50	.313		7.00		.500	3.04				3.04	
12X 4X	.375/ .469T	21.63	29.1	29.9	187.3	4.8	6.4	6.3	6.38	12.47	.375		4.00		.469	4.76				4.76	
10X 6X	.313/ .563T	22.10	23.7	34.5	151.6	4.3	6.4	4.4	6.50	10.56	.313		6.00		.563	3.37				3.37	
10X 7X	.313/ .500T	22.54	23.7	35.7	152.7	4.3	6.4	4.3	6.63	10.50	.313		7.00		.500	3.35				3.35	
12X 4X	.375/ .531T	22.95	29.7	32.2	196.9	4.9	6.6	6.1	6.63	12.53	.375		4.00		.531	4.78				4.78	
9X 7X	.313/ .563T	23.15	21.1	35.3	128.4	3.9	6.1	3.7	6.75	9.56	.313		7.00		.563	3.06				3.06	
9X 8X	.313/ .500T	23.26	30.0	34.4	203.4	4.9	6.8	5.9	6.84	12.47	.375		5.00		.500	3.04				3.04	
12X 5X	.375/ .469T	23.39	30.3	34.4	206.2	4.9	6.8	6.0	6.80	12.59	.375		4.00		.469	4.76				4.76	
10X 7X	.313/ .563T	24.00	24.1	38.9	160.4	4.3	6.7	4.1	7.06	10.56	.313		7.00		.563	3.37				3.37	
10X 8X	.313/ .500T	24.24	24.1	39.7	160.6	4.3	6.7	4.0	7.13	10.50	.313		8.00		.500	3.35				3.35	
12X 4X	.375/ .656T	24.24	30.8	36.4	214.9	5.0	7.0	5.9	7.13	12.66	.375		4.00		.656	4.83				4.83	
9X 8X	.313/ .563T	24.85	21.4	38.5	134.6	3.9	6.3	3.5	7.31	9.56	.313		8.00		.563	3.06				3.06	
12X 6X	.375/ .469T	24.85	30.8	38.7	217.7	4.9	7.1	5.6	7.31	12.47	.375		6.00		.469	4.76				4.76	
12X 5X	.375/ .594T	25.40	31.2	39.8	224.1	5.0	7.2	5.6	7.47	12.59	.375		5.00		.594	4.80				4.80	
10X 8X	.313/ .563T	25.94	24.4	43.3	168.5	4.3	6.9	3.9	7.63	10.56	.313		8.00		.563	3.37				3.37	
12X 5X	.375/ .656T	26.45	31.7	42.5	233.9	5.0	7.4	5.5	7.70	12.66	.375		5.00		.656	4.83				4.83	
12X 7X	.375/ .469T	26.45	31.4	43.1	230.6	5.0	7.3	5.4	7.78	12.47	.375		7.00		.469	4.76				4.76	
12X 6X	.375/ .594T	27.40	32.0	45.2	239.9	5.0	7.5	5.3	8.06	12.59	.375		6.00		.594	4.80				4.80	
12X 7X	.375/ .531T	27.95	32.0	47.0	242.8	5.0	7.6	5.2	8.22	12.53	.375		7.00		.531	4.78				4.78	
12X 6X	.375/ .656T	28.70	32.5	48.4	250.2	5.0	7.7	5.2	8.44	12.66	.375		6.00		.656	4.83				4.83	
12X 7X	.375/ .594T	29.44	32.6	51.7	254.8	5.0	7.8	5.0	8.66	12.59	.375		7.00		.594	4.80				4.80	
14X 5X	.438/ .531T	29.85	39.8	46.7	316.9	5.5	8.0	6.8	8.70	14.53	.438		5.00		.531	6.46				6.46	
14X 5X	.438/ .594T	30.91	40.6	49.8	330.9	5.6	8.2	6.7	9.09	14.59	.438		5.00		.594	6.49				6.49	
12X 8X	.375/ .594T	31.45	33.1	56.0	266.5	5.0	8.1	4.8	9.25	12.59	.375		8.00		.594	4.80				4.80	
12X 9X	.375/ .531T	31.55	33.0	56.6	265.9	4.9	8.1	4.7	9.28	12.53	.375		9.00		.531	4.78				4.78	
14X 6X	.438/ .531T	31.65	40.9	52.3	338.5	5.6	8.3	6.5	9.31	14.53	.438		6.00		.531	6.46				6.46	
14X 5X	.438/ .656T	31.99	41.3	52.8	344.6	5.6	8.4	6.5	9.41	14.66	.438		5.00		.656	6.52				6.52	
16X 5X	.438/ .531T	32.84	47.9	55.6	431.1	6.2	9.0	7.8	9.66	16.53	.438		5.00		.531	7.34				7.34	
14X 6X	.438/ .594T	32.95	41.7	56.0	353.7	5.6	8.5	6.3	9.69	14.59	.438		6.00		.594	6.49				6.49	
14X 5X	.438/ .719T	33.05	41.9	55.8	357.6	5.6	8.5	6.4	9.72	14.72	.438		5.00		.719	6.54				6.54	

0.2188 - 7/32 in.



.219 IN. PLATE (AREA= 1.63 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	***** BEAM DIMENSIONS *****			SHEAR AREA		
		ZPL	ZFL	INERTIA				DEPTH	THICK	WIDTH		FLANGE THICK	
12X 8X .375/.656T	33.15	33.6	60.2	277.6	4.9	8.3	4.6	9.75	12.66	.375	8.00	.656	4.83
14X 7X .438/.531T	33.46	41.8	57.9	358.1	5.6	8.6	6.2	9.84	14.53	.438	7.00	.531	6.46
16X 5X .438/.594T	33.90	48.8	59.1	449.5	6.2	9.2	7.6	9.97	16.59	.438	5.00	.594	7.36
14X 6X .438/.656T	34.20	42.4	59.6	368.4	5.6	8.7	6.2	10.06	14.66	.438	6.00	.656	6.52
16X 6X .438/.531T	34.65	49.3	62.0	459.8	6.2	9.3	7.4	10.19	16.53	.438	6.00	.531	7.34
16X 5X .438/.656T	34.95	49.7	62.6	467.4	6.3	9.4	7.5	10.28	16.66	.438	5.00	.656	7.39
14X 7X .438/.531T	34.95	42.6	62.2	374.2	5.6	8.8	6.0	10.28	14.53	.438	7.00	.594	6.49
14X 8X .438/.531T	35.29	42.6	63.5	375.8	5.6	8.8	5.9	10.38	14.53	.438	8.00	.531	6.46
16X 6X .438/.594T	35.90	50.2	66.2	479.9	6.3	9.6	7.2	10.56	16.59	.438	6.00	.594	7.36
16X 5X .438/.719T	36.01	50.5	66.0	484.6	6.3	9.6	7.3	10.59	16.72	.438	5.00	.719	7.42
16X 7X .438/.531T	36.45	50.4	68.3	485.8	6.3	9.6	7.1	10.72	16.53	.438	7.00	.531	7.34
14X 8X .438/.594T	36.99	43.3	68.4	392.8	5.6	9.1	5.7	10.88	14.59	.438	8.00	.594	6.49
14X 9X .438/.531T	37.09	43.2	69.1	392.2	5.6	9.1	5.7	10.31	14.53	.438	9.00	.531	6.46
16X 7X .438/.594T	37.94	51.3	73.2	507.2	6.3	9.9	6.9	11.16	16.59	.438	7.00	.594	7.36
16X 8X .438/.531T	39.25	51.4	74.6	509.4	6.3	9.9	6.8	11.25	16.53	.438	8.00	.531	7.34
16X 6X .438/.719T	38.45	51.8	74.5	517.7	6.3	10.0	7.0	11.31	16.72	.438	6.00	.719	7.42
16X 7X .438/.656T	39.41	52.2	78.0	527.7	6.3	10.1	6.8	11.59	16.66	.438	7.00	.656	7.39
16X 8X .438/.594T	39.95	52.3	80.2	532.0	6.3	10.2	6.6	11.75	16.59	.438	8.00	.594	7.36
16X 9X .438/.531T	40.05	52.2	80.9	531.3	6.3	10.2	6.6	11.78	16.53	.438	9.00	.531	7.34
16X 7X .438/.719T	40.90	53.0	82.9	547.3	6.3	10.3	6.6	12.03	16.72	.438	7.00	.719	7.42
16X 8X .438/.656T	41.65	53.1	85.7	553.6	6.3	10.4	6.5	12.25	16.66	.438	8.00	.656	7.39
18X 5X .500/.656T	41.75	62.4	75.7	645.8	6.8	10.4	8.5	12.28	18.66	.500	5.00	.656	9.44
16X 9X .438/.594T	41.96	53.1	87.2	554.9	6.3	10.4	6.4	12.34	16.59	.438	9.00	.594	7.36
16X 5X .500/.875T	42.09	55.4	76.4	549.2	6.3	9.9	7.2	12.38	16.88	.500	5.00	.875	8.55
18X 6X .500/.594T	42.70	63.0	79.9	662.6	6.8	10.5	8.3	12.56	18.59	.500	6.00	.594	9.40
18X 5X .500/.719T	42.81	63.4	79.5	668.1	6.9	10.5	8.4	12.59	18.72	.500	5.00	.719	9.47
14X 10X .438/.656T	43.15	45.2	86.5	441.8	5.6	9.8	5.1	12.69	14.66	.438	10.00	.656	6.52
16X 8X .438/.719T	43.35	53.9	91.2	573.9	6.3	10.6	6.3	12.75	16.72	.438	8.00	.719	7.42
16X 9X .438/.656T	43.89	54.0	93.3	577.1	6.3	10.7	6.2	12.91	16.66	.438	9.00	.656	7.39
18X 6X .500/.656T	44.00	64.2	84.4	688.0	6.9	10.7	8.2	12.94	18.66	.500	6.00	.656	9.44
16X 10X .438/.594T	44.00	53.9	94.3	576.1	6.3	10.7	6.1	12.94	16.59	.438	10.00	.594	7.36
14X 11X .438/.656T	45.36	45.7	93.0	456.0	5.5	10.0	4.9	13.34	14.66	.438	11.00	.656	6.52
16X 9X .438/.719T	45.80	54.7	99.6	598.3	6.3	10.9	6.0	13.47	16.72	.438	9.00	.719	7.42
16X 10X .438/.656T	46.10	54.7	100.9	598.7	6.3	10.9	5.9	13.56	16.66	.438	10.00	.656	7.39
18X 7X .500/.719T	47.70	66.7	98.3	752.7	6.9	11.3	7.7	14.03	18.72	.500	7.00	.719	9.47
18X 6X .500/.875T	48.45	67.5	100.2	770.2	7.0	11.4	7.7	14.25	18.88	.500	6.00	.875	9.55
18X 8X .500/.719T	50.15	68.0	107.6	789.3	6.9	11.6	7.3	14.75	18.72	.500	8.00	.719	9.47
18X 9X .500/.656T	50.69	68.1	110.0	794.3	6.9	11.7	7.2	14.91	18.66	.500	9.00	.656	9.44
18X 10X .500/.594T	50.80	68.0	111.0	793.2	6.9	11.7	7.1	14.94	18.59	.500	10.00	.594	9.40
18X 7X .500/.875T	51.44	69.1	111.2	813.7	7.0	11.8	7.3	15.13	18.88	.500	7.00	.875	9.55
18X 9X .500/.719T	52.60	69.2	116.7	822.6	6.9	11.9	7.0	15.47	18.72	.500	9.00	.719	9.47
18X 10X .500/.656T	52.90	69.2	118.3	824.0	6.9	11.9	7.0	15.56	18.66	.500	10.00	.656	9.44
18X 8X .500/.875T	54.40	70.3	122.3	853.1	7.0	12.1	7.0	16.00	18.88	.500	8.00	.875	9.55
18X 11X .500/.656T	55.15	70.1	126.8	851.9	6.9	12.2	6.7	16.22	18.66	.500	11.00	.656	9.44
18X 11X .500/.719T	57.49	71.1	135.2	882.2	6.9	12.4	6.5	16.91	18.72	.500	11.00	.719	9.47

0.2188 - 7/32 in.

.219 IN. PLATE (AREA= 1.63 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	WEB THICK	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	FLANGE THICK	
10X12X .500/ .719T	59.94	71.9	144.3	908.5	6.9	12.6	6.3	17.63	18.72	.500	12.00	.719	9.47
10X10X .500/ .875T	60.35	72.4	144.2	921.0	6.9	12.7	6.4	17.75	18.88	.500	10.00	.875	9.55
21X 8X .625/ .875T	68.44	99.8	155.0	1341.6	7.9	13.4	8.7	20.13	21.88	.625	8.00	.875	13.81
21X10X .625/ .750T	70.14	100.5	163.4	1366.9	7.8	13.6	8.4	20.63	21.75	.625	10.00	.750	13.73
21X 9X .625/ .875T	71.40	101.6	167.7	1398.5	7.9	13.8	8.3	21.00	21.88	.625	9.00	.875	13.81
21X11X .625/ .750T	72.69	101.9	174.6	1413.5	7.8	13.9	8.1	21.38	21.75	.625	11.00	.750	13.73
21X10X .625/ .875T	74.39	103.2	180.6	1451.4	7.9	14.1	8.0	21.88	21.88	.625	10.00	.875	13.81
21X 9X .625/1.125T	79.05	106.3	197.6	1545.1	7.9	14.5	7.8	23.25	22.13	.625	9.00	1.125	13.97
21X12X .625/ .875T	80.34	106.0	205.6	1545.2	7.8	14.6	7.5	23.63	21.88	.625	12.00	.875	13.81
21X 9X .688/ .875T	82.89	132.2	204.1	2014.1	8.8	15.2	9.9	24.38	24.88	.688	9.00	.875	17.27
21X13X .625/ .875T	83.30	107.1	218.2	1587.8	7.8	14.8	7.3	24.50	21.88	.625	13.00	.875	13.81
21X10X .688/ .875T	85.85	134.5	218.5	2089.4	8.8	15.5	9.6	25.25	24.88	.688	10.00	.875	17.27
21X14X .625/ .875T	86.29	108.2	230.6	1627.3	7.8	15.0	7.1	25.38	21.88	.625	14.00	.875	13.81
21X 8X .688/1.125T	86.70	136.1	219.8	2130.5	8.9	15.7	9.7	25.50	25.13	.688	8.00	1.125	17.44
21X11X .688/ .875T	88.84	136.5	232.8	2159.8	8.8	15.8	9.3	26.13	24.88	.688	11.00	.875	17.27
21X 9X .688/1.125T	90.54	138.6	238.2	2220.9	8.9	16.0	9.3	26.63	25.13	.688	9.00	1.125	17.44
21X12X .688/ .875T	91.80	138.3	247.3	2226.3	8.8	16.1	9.0	27.00	24.88	.688	12.00	.875	17.27
21X13X .688/ .875T	94.79	140.0	261.6	2288.7	9.8	16.4	8.7	27.88	24.88	.688	13.00	.875	17.27
21X11X .750/1.125T	98.19	142.8	274.2	2380.6	8.8	16.7	8.7	28.88	25.13	.688	11.00	1.125	17.44
21X 8X .750/1.125T	99.45	173.0	263.2	2959.5	9.8	17.1	11.2	29.25	28.13	.750	8.00	1.125	21.26
21X11X .750/ .875T	101.59	173.9	277.5	3003.8	9.8	17.3	10.8	29.98	27.88	.750	11.00	.875	21.07
21X 9X .750/1.125T	103.29	176.4	283.7	3083.5	9.8	17.5	10.9	30.38	28.13	.750	9.00	1.125	21.26
21X12X .750/ .875T	104.55	176.3	293.6	3095.7	9.8	17.6	10.5	30.75	27.88	.750	12.00	.875	21.07
21X10X .750/1.125T	107.10	179.5	303.9	3198.8	9.8	17.8	10.5	31.50	28.13	.750	10.00	1.125	21.26
21X11X .750/1.125T	110.94	182.2	324.2	3306.5	9.8	18.1	10.2	32.63	28.13	.750	11.00	1.125	21.26
21X 9X .875/1.375T	122.40	202.5	333.7	3604.2	9.8	17.8	10.8	36.00	28.38	.875	9.00	1.375	25.02
30X10X .875/1.375T	136.00	244.8	411.2	4848.9	10.8	19.8	11.8	40.00	31.38	.875	10.00	1.375	27.65
30X13X .875/1.125T	138.99	245.8	432.9	4914.4	10.8	20.0	11.4	40.88	31.13	.875	13.00	1.125	27.43
30X11X .875/1.375T	140.69	248.7	438.2	5012.8	10.8	20.2	11.4	41.38	31.38	.875	11.00	1.375	27.65
30X14X .875/1.125T	142.80	248.7	455.4	5042.2	10.8	20.3	11.1	42.00	31.13	.875	14.00	1.125	27.43
30X10X .875/1.375T	154.70	258.1	519.3	5448.3	10.8	21.1	10.5	45.50	31.38	.875	14.00	1.375	27.65
33X10X1.000/1.500T	163.20	319.3	512.2	6828.1	11.7	21.4	13.3	48.00	34.50	1.000	10.00	1.500	34.72
33X11X1.000/1.375T	163.64	318.9	516.9	6823.7	11.7	21.4	13.2	48.13	34.38	1.000	11.00	1.375	34.60
36X13X1.000/1.125T	172.14	365.1	575.2	8341.6	12.6	22.8	14.5	50.63	37.13	1.000	13.00	1.125	37.35
33X13X1.000/1.375T	172.99	327.9	576.6	7231.8	11.7	22.1	12.5	50.88	34.38	1.000	13.00	1.375	34.60
36X11X1.000/1.375T	173.84	368.9	582.4	8431.2	12.7	23.0	14.6	51.13	37.38	1.000	11.00	1.375	37.60
36X10X1.000/1.750T	181.90	381.0	630.8	9018.9	12.8	23.7	14.3	53.50	37.75	1.000	10.00	1.750	37.97
33X16X1.000/1.375T	187.00	338.9	665.5	7769.9	11.7	22.9	11.7	55.00	34.38	1.000	16.00	1.375	34.60

0.2188 - 7/32 in.



250 IN. PLATE (AREA= 2.13 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS				R	YP	YF	AREA	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA	INERTIA					DEPTH	THICK	WIDTH	
3X 2X .125/.188T	2.55	5.4	1.5	4.1	1.2	1.2	.8	2.7	.75	3.19	.125	2.00	.188
4X 2X .125/.188T	2.99	7.2	2.1	7.3	1.6	1.6	1.0	3.4	.88	4.19	.125	2.00	.188
3X 3X .125/.188T	3.20	5.7	2.1	5.3	1.3	1.3	.9	2.5	.94	3.19	.125	3.00	.188
4X 3X .125/.188T	3.60	7.7	2.6	9.2	1.7	1.7	1.2	3.2	1.06	4.19	.125	3.00	.188
4X 2X .188/.313T	4.69	7.9	3.3	10.7	1.7	1.7	1.3	3.2	1.38	4.31	.188	2.00	.313
5X 2X .188/.250T	4.90	9.6	3.8	14.9	2.0	1.6	1.6	3.9	1.44	5.25	.188	2.00	.250
3X 3X .188/.313T	5.10	6.2	3.3	7.7	1.5	1.5	1.2	2.3	1.58	3.31	.188	3.00	.313
5X 2X .188/.313T	5.30	10.0	4.3	16.8	2.1	1.7	1.7	3.9	1.56	5.31	.188	2.00	.313
6X 2X .188/.313T	5.95	12.1	5.5	24.8	2.6	2.2	2.2	4.3	1.75	6.31	.188	2.00	.313
6X 3X .188/.250T	6.39	12.3	6.2	26.9	2.6	2.2	2.2	4.3	1.86	6.25	.188	3.00	.250
5X 4X .188/.250T	6.60	10.6	6.1	21.3	2.3	2.0	2.0	3.5	1.94	5.25	.188	4.00	.250
4X 4X .188/.313T	6.80	8.6	5.7	15.7	1.9	1.8	1.8	2.8	2.00	4.31	.188	4.00	.313
6X 3X .188/.313T	7.00	12.8	7.2	30.2	2.7	2.4	2.4	4.2	2.06	6.31	.188	3.00	.313
6X 4X .188/.250T	7.24	12.8	7.6	31.1	2.7	2.4	2.4	4.1	2.13	6.25	.188	4.00	.250
5X 4X .188/.313T	7.45	10.9	7.3	24.2	2.4	2.2	2.2	3.9	2.19	5.31	.188	4.00	.313
6X 4X .188/.313T	8.09	13.2	9.0	35.0	2.8	2.7	2.7	3.9	2.38	6.31	.188	4.00	.313
5X 5X .188/.313T	8.50	11.1	8.7	27.2	2.4	2.4	2.4	3.1	2.50	5.31	.188	5.00	.313
7X 3X .250/.313T	9.15	15.3	9.3	43.9	3.0	2.9	2.9	4.7	2.69	7.31	.250	3.00	.313
6X 3X .250/.438T	9.55	13.7	9.6	37.7	2.8	2.8	2.8	3.9	2.81	6.44	.250	3.00	.313
7X 3X .250/.375T	9.79	15.8	10.4	47.9	3.1	3.0	3.0	4.6	2.88	7.38	.250	3.00	.375
8X 3X .250/.313T	10.00	17.7	11.1	58.4	3.4	3.3	3.3	5.3	2.94	8.31	.250	3.00	.313
7X 4X .250/.313T	10.20	15.9	11.3	49.8	3.1	3.1	3.1	4.4	3.00	7.31	.250	4.00	.313
7X 3X .250/.438T	10.40	16.1	11.5	51.6	3.2	3.2	3.2	4.5	3.06	7.44	.250	3.00	.438
8X 3X .250/.375T	10.64	18.2	12.3	63.5	3.5	3.5	3.5	5.1	3.13	8.38	.250	3.00	.375
9X 3X .250/.20.2	10.89	20.2	12.9	75.3	3.8	3.7	3.7	5.8	3.19	9.31	.250	3.00	.313
8X 4X .250/.313T	11.05	18.4	13.3	66.1	3.5	3.6	3.6	5.0	3.25	8.31	.250	4.00	.313
7X 5X .250/.313T	11.25	16.3	13.2	55.2	3.2	3.4	3.4	4.2	3.31	7.31	.250	5.00	.313
8X 3X .250/.438T	11.49	20.8	14.3	81.6	3.9	3.9	3.9	5.7	3.38	9.38	.250	3.00	.438
9X 3X .250/.375T	11.90	21.0	15.4	84.8	3.9	4.0	4.0	5.5	3.50	9.31	.250	4.00	.375
9X 4X .250/.313T	12.10	21.3	15.7	87.6	3.9	4.1	4.1	5.6	3.56	9.44	.250	3.00	.438
8X 5X .250/.313T	12.10	18.9	15.3	72.8	3.6	3.8	3.8	4.7	3.56	8.38	.250	5.00	.313
9X 4X .250/.375T	12.75	21.6	17.3	92.4	4.0	4.3	4.3	5.4	3.75	9.38	.250	4.00	.375
9X 5X .250/.313T	12.95	21.6	17.8	93.5	4.0	4.3	4.3	5.2	3.81	9.31	.250	5.00	.313
8X 5X .250/.375T	13.19	19.4	17.6	79.7	3.6	4.1	4.1	4.5	3.88	8.38	.250	5.00	.375
7X 5X .250/.438T	13.40	17.1	16.9	65.4	3.3	3.8	3.8	3.9	3.94	7.44	.250	5.00	.438
9X 4X .250/.438T	13.60	22.1	19.1	99.1	4.0	4.5	4.5	5.2	4.00	9.44	.250	4.00	.438
9X 5X .250/.375T	14.04	22.2	20.2	101.7	4.0	4.6	4.6	5.0	4.13	9.38	.250	5.00	.375
8X 5X .250/.438T	14.25	19.8	19.6	85.7	3.7	4.3	4.3	4.4	4.19	8.44	.250	5.00	.438
6X 6X .250/.375T	14.45	19.8	20.2	86.3	3.7	4.4	4.4	4.3	4.25	8.38	.250	6.00	.375
7X 6X .250/.438T	14.69	17.4	19.5	70.8	3.3	4.1	4.1	3.6	4.38	7.44	.250	5.00	.438
9X 5X .250/.438T	15.10	22.7	22.5	103.4	4.1	4.8	4.8	4.9	4.44	9.44	.250	5.00	.438
9X 6X .250/.375T	15.30	22.6	23.0	109.9	4.1	4.9	4.9	4.8	4.50	9.38	.250	6.00	.375
10X 4X .313/.375T	15.74	25.2	28.7	120.8	4.2	4.8	4.8	5.8	4.63	10.38	.313	4.00	.375
8X 6X .250/.438T	15.74	20.2	22.6	92.7	3.7	4.6	4.6	4.1	4.63	8.44	.250	6.00	.438

0.2500-1/4 in.

•250 IN. PLATE (AREA= 2.13 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS					SHEAR		
WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	AREA
7X 7X .250/.438T	16.35	17.6	22.2	75.6	3.3	4.3	3.4	4.81	7.44	.250	.438	1.92
10X 4X .313/.438T	16.59	25.8	22.7	129.0	4.3	5.0	5.7	4.88	10.44	.313	.438	3.35
9X 6X .250/.438T	16.59	23.1	25.8	118.2	4.1	5.1	4.6	4.88	9.44	.250	.438	2.42
10X 5X .313/.438T	17.00	26.0	23.9	132.3	4.3	5.1	5.5	5.00	10.38	.313	.375	3.33
8X 7X .250/.438T	17.20	20.5	25.6	98.9	3.7	4.8	3.9	5.06	8.44	.250	.438	2.17
10X 4X .313/.500T	17.44	26.4	24.7	137.1	4.3	5.2	5.6	5.13	10.50	.313	.500	3.36
9X 7X .250/.438T	18.05	23.5	29.2	126.0	4.1	5.4	4.3	5.31	9.44	.250	.438	2.42
10X 6X .313/.438T	18.29	26.6	27.0	142.4	4.4	5.4	5.3	5.38	10.38	.313	.375	3.33
10X 5X .313/.500T	19.14	27.1	28.8	150.2	4.4	5.5	5.2	5.63	10.50	.313	.500	3.36
10X 6X .313/.438T	19.55	27.2	30.0	152.3	4.4	5.6	5.1	5.75	10.44	.313	.438	3.35
10X 5X .313/.563T	20.20	27.6	31.2	158.4	4.4	5.7	5.1	5.34	10.56	.313	.563	3.38
10X 6X .313/.500T	20.84	27.7	32.9	161.7	4.4	5.8	4.9	6.13	10.50	.313	.500	3.36
10X 7X .313/.438T	21.05	27.7	33.6	162.1	4.4	5.9	4.8	6.19	10.44	.313	.438	3.35
9X 7X .313/.500T	21.45	24.8	32.8	137.9	4.0	5.6	4.2	6.31	9.50	.313	.500	3.05
12X 4X .375/.469T	21.69	33.9	31.1	206.4	4.9	6.1	6.6	6.38	12.47	.375	.469	4.77
10X 6X .313/.563T	22.10	28.2	35.8	170.5	4.4	6.1	4.8	6.50	10.56	.313	.563	3.38
10X 7X .313/.500T	22.54	28.2	37.0	171.9	4.4	6.1	4.6	6.63	10.50	.313	.500	3.36
12X 4X .375/.531T	22.54	34.6	33.4	217.2	5.0	6.3	6.5	6.63	12.53	.375	.531	4.79
9X 7X .313/.563T	22.95	25.2	36.0	145.5	4.0	5.8	4.0	6.75	9.56	.313	.563	3.07
9X 8X .313/.500T	23.15	25.2	36.6	145.4	4.0	5.8	4.0	6.81	9.50	.313	.500	3.05
12X 5X .375/.469T	23.26	34.9	35.7	227.7	5.0	6.4	6.3	6.84	12.47	.375	.469	4.77
12X 4X .375/.594T	23.39	35.2	35.7	227.7	5.0	6.5	6.4	6.88	12.59	.375	.594	4.82
10X 7X .313/.563T	24.00	28.6	40.3	181.0	4.4	6.3	4.5	7.06	10.56	.313	.563	3.38
10X 8X .313/.500T	24.24	28.6	41.2	181.3	4.4	6.3	4.4	7.13	10.50	.313	.500	3.36
12X 4X .375/.656T	24.24	35.3	37.9	237.5	5.1	6.6	6.3	7.13	12.66	.375	.656	4.84
9X 8X .313/.563T	24.85	25.5	40.0	152.9	4.0	6.0	3.8	7.31	9.56	.313	.563	3.07
12X 5X .375/.469T	24.85	35.8	40.2	241.0	5.1	6.7	6.0	7.31	12.47	.375	.469	4.77
12X 5X .375/.594T	25.40	36.3	41.3	248.1	5.1	6.8	6.0	7.47	12.59	.375	.594	4.82
10X 8X .313/.563T	25.94	29.0	45.0	190.6	4.4	6.6	4.2	7.63	10.56	.313	.563	3.38
12X 5X .375/.656T	26.45	36.9	44.1	259.2	5.1	7.0	5.9	7.78	12.66	.375	.656	4.84
12X 7X .375/.469T	26.45	36.5	44.7	259.2	5.1	7.0	5.7	7.78	12.47	.375	.469	4.77
12X 6X .375/.594T	27.40	37.1	47.0	266.3	5.1	7.2	5.7	8.06	12.59	.375	.594	4.82
12X 7X .375/.531T	27.95	37.2	48.8	269.7	5.1	7.2	5.5	8.22	12.53	.375	.531	4.79
12X 6X .375/.656T	28.70	37.7	50.2	278.0	5.1	7.4	5.5	8.44	12.66	.375	.656	4.84
12X 7X .375/.594T	29.44	37.8	52.6	282.5	5.1	7.5	5.4	8.66	12.59	.375	.594	4.82
12X 8X .375/.531T	29.75	37.8	53.7	283.5	5.1	7.5	5.3	8.75	12.53	.375	.531	4.79
14X 5X .438/.531T	29.85	45.4	48.5	346.7	5.6	7.6	7.1	8.78	14.53	.438	.531	6.47
14X 5X .438/.594T	30.91	46.3	51.7	362.2	5.7	7.8	7.0	9.09	14.59	.438	.594	6.58
12X 8X .375/.594T	31.45	38.4	58.2	297.0	5.1	7.7	5.1	9.25	12.59	.375	.594	4.82
12X 9X .375/.531T	31.55	38.3	58.8	296.4	5.1	7.7	5.0	9.28	12.53	.375	.531	4.79
14X 6X .438/.531T	31.65	46.6	54.3	370.8	5.7	8.0	6.8	9.31	14.53	.438	.531	6.47
14X 5X .438/.656T	31.99	47.0	54.8	377.5	5.7	8.0	6.9	9.41	14.66	.438	.656	6.53
16X 5X .438/.531T	32.84	54.3	57.7	469.2	6.3	8.6	8.1	9.66	16.53	.438	.531	7.35
14X 6X .438/.594T	32.95	47.5	58.1	387.7	5.7	8.2	6.7	9.69	14.59	.438	.594	6.50
14X 5X .438/.719T	33.05	47.8	57.9	391.9	5.8	8.2	6.8	9.72	14.72	.438	.719	6.56

0.2500 - 1/4 in.



.250 IN. PLATE (AREA= 2.13 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****				SHEAR AREA	
		ZPL	ZFL	INERTIA				WEB THICK	FLANGE WIDTH	THICK			
12X 8X .375/.656T	33.15	39.0	62.5	309.8	5.1	8.0	5.0	9.75	12.66	.375	8.00	.656	4.84
14X 7X .438/.531T	33.46	47.6	60.1	392.7	5.7	8.2	6.5	9.84	14.53	.438	7.00	.531	6.47
16X 5X .438/.594T	33.90	55.3	61.3	489.5	6.4	8.9	8.0	9.97	16.59	.438	5.00	.594	7.30
14X 6X .438/.561T	34.20	48.2	61.9	404.2	5.8	8.4	6.5	10.06	14.66	.438	6.00	.656	6.53
16X 6X .438/.531T	34.65	55.7	64.3	501.0	6.4	9.0	7.8	10.19	16.53	.438	6.00	.531	7.35
16X 5X .438/.561T	34.95	56.2	64.9	509.2	6.4	9.1	7.8	10.28	16.66	.438	5.00	.656	7.41
14X 7X .438/.594T	34.95	48.5	64.5	410.8	5.8	8.5	6.4	10.28	14.59	.438	7.00	.594	6.50
14X 8X .438/.531T	35.29	48.5	65.9	412.7	5.7	8.5	6.3	10.38	14.53	.438	8.00	.531	6.47
16X 6X .438/.594T	35.90	56.7	68.7	523.2	6.4	9.2	7.6	10.56	16.59	.438	6.00	.594	7.43
16X 5X .438/.719T	36.01	57.1	68.5	528.2	6.4	9.3	7.7	10.59	16.72	.438	5.00	.719	7.30
16X 7X .438/.531T	36.45	57.0	70.8	529.8	6.4	9.3	7.5	10.72	16.53	.438	7.00	.531	7.35
16X 8X .438/.594T	37.09	49.3	71.0	431.8	5.8	8.8	6.1	10.88	14.59	.438	8.00	.594	6.50
14X 9X .438/.531T	37.09	49.2	71.6	431.2	5.8	8.8	6.0	10.91	14.53	.438	9.00	.531	6.47
16X 7X .438/.594T	37.94	58.0	75.9	553.5	6.5	9.5	7.3	11.16	16.59	.438	7.00	.594	7.30
16X 8X .438/.531T	38.25	58.0	77.3	556.1	6.4	9.6	7.2	11.25	16.53	.438	8.00	.531	7.35
16X 6X .438/.719T	38.45	58.6	77.2	565.0	6.5	9.7	7.3	11.31	16.72	.438	6.00	.719	7.43
16X 7X .438/.656T	39.41	58.9	80.8	576.3	6.5	9.8	7.1	11.59	16.66	.438	7.00	.656	7.41
16X 8X .438/.594T	39.95	59.1	83.1	581.3	6.5	9.8	7.0	11.75	16.59	.438	8.00	.594	7.30
16X 9X .438/.531T	40.05	59.0	85.9	588.6	6.5	9.8	6.9	11.78	16.53	.438	9.00	.531	7.35
16X 7X .438/.719T	40.90	59.8	85.9	598.2	6.5	10.0	7.0	12.03	16.72	.438	7.00	.719	7.43
16X 8X .438/.656T	41.65	60.0	88.8	605.3	6.5	10.1	6.8	12.25	16.66	.438	8.00	.656	7.41
18X 5X .508/.656T	41.75	69.5	78.4	696.8	7.0	10.0	6.9	12.28	16.66	.500	5.00	.656	9.46
16X 9X .438/.594T	41.96	60.0	90.3	606.9	6.5	10.1	6.7	12.34	16.59	.438	9.00	.594	7.30
16X 5X .508/.875T	42.09	62.1	79.2	596.0	6.4	9.6	7.5	12.38	16.88	.500	5.00	.875	8.57
18X 6X .500/.594T	42.70	70.2	82.7	715.3	7.0	10.2	8.7	12.56	18.59	.500	6.00	.594	9.42
18X 5X .500/.719T	42.81	70.6	82.4	721.1	7.0	10.2	8.8	12.59	18.72	.500	5.00	.719	9.49
14X10X .438/.656T	43.15	51.4	89.6	487.3	5.7	9.5	5.4	12.69	14.66	.438	10.00	.656	6.53
16X 8X .438/.719T	43.35	60.8	94.4	627.9	6.5	10.3	6.6	12.75	16.72	.438	8.00	.719	7.43
16X 9X .438/.656T	43.89	60.9	96.6	631.6	6.5	10.4	6.5	12.91	16.66	.438	9.00	.656	7.41
18X 6X .500/.656T	44.00	71.4	97.3	742.8	7.0	10.4	6.5	12.94	16.59	.438	10.00	.656	9.46
16X10X .438/.594T	44.00	60.8	97.6	630.7	6.5	10.4	6.5	12.94	16.59	.438	10.00	.594	7.30
14X11X .438/.656T	45.36	52.0	36.4	503.4	5.7	9.7	5.2	13.34	14.66	.438	11.00	.656	6.53
16X 9X .438/.719T	45.80	61.7	103.1	655.3	6.5	10.6	6.4	13.47	16.72	.438	9.00	.719	7.43
16X10X .438/.656T	46.10	61.7	104.5	655.9	6.5	10.6	6.3	13.56	16.66	.438	10.00	.656	7.41
18X 7X .500/.719T	47.70	74.2	101.7	813.6	7.1	11.0	8.0	14.03	18.72	.500	7.00	.719	9.49
18X 6X .500/.875T	48.45	75.0	103.6	832.5	7.1	11.1	8.0	14.25	18.88	.500	6.00	.875	9.57
18X 8X .500/.719T	50.15	75.6	111.2	853.7	7.1	11.3	7.7	14.75	18.72	.500	8.00	.719	9.49
18X 9X .500/.656T	50.69	75.7	113.7	859.4	7.1	11.4	7.6	14.91	18.66	.500	9.00	.656	9.46
18X10X .500/.594T	50.80	75.6	114.7	858.4	7.1	11.4	7.5	14.94	18.59	.500	10.00	.594	9.42
18X 7X .500/.875T	51.44	76.7	115.0	880.2	7.1	11.5	7.7	15.13	18.88	.500	7.00	.875	9.57
18X 9X .500/.719T	52.60	76.9	120.6	890.5	7.1	11.6	7.4	15.47	18.72	.500	9.00	.719	9.49
18X10X .500/.656T	52.90	76.8	122.2	892.2	7.1	11.6	7.3	15.56	18.66	.500	10.00	.656	9.46
18X 8X .500/.875T	54.40	78.1	126.5	923.7	7.1	11.8	7.3	16.00	18.88	.500	8.00	.875	9.57
18X11X .500/.656T	55.15	77.8	131.0	922.9	7.1	11.9	7.0	16.22	18.66	.500	11.00	.656	9.46
18X11X .500/.719T	57.49	78.9	139.7	956.3	7.1	12.1	6.8	16.91	18.72	.500	11.00	.719	9.49

0.2500 - 1/4 in.

0.250 IN. PLATE (AREA= 2.13 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL						WEB THICK	FLANGE WIDTH	THICK	
18X12X .500/ .719T	59.94	79.8	149.0	7.1	12.4	6.6	17.63	18.72	.500	12.00	.719	9.49
18X10X .500/ .875T	60.35	80.4	149.0	7.1	12.4	6.7	17.75	18.88	.500	10.00	.875	9.57
21X 8X .625/ .875T	68.44	108.5	159.5	8.0	13.2	9.0	20.13	21.88	.625	8.00	.875	13.83
21X10X .625/ .750T	70.14	109.2	168.2	8.0	13.3	8.7	20.63	21.75	.625	10.00	.750	13.75
21X 9X .625/ .875T	71.40	110.4	172.6	8.0	13.5	8.6	21.00	21.88	.625	9.00	.875	13.83
21X11X .625/ .750T	72.69	110.7	179.6	8.0	13.6	8.4	21.38	21.75	.625	11.00	.750	13.75
21X10X .625/ .875T	74.39	112.1	185.8	8.0	13.8	8.3	21.88	21.88	.625	10.00	.875	13.83
21X 9X .625/1.125T	79.05	115.4	203.3	8.1	14.3	8.1	23.25	22.13	.625	9.00	1.125	13.99
21X12X .625/ .875T	80.34	115.0	211.4	8.0	14.3	7.8	23.63	21.88	.625	12.00	.875	13.83
24X 9X .688/ .875T	82.89	142.0	209.4	9.0	15.0	10.2	24.38	24.88	.688	9.00	.875	17.29
21X13X .625/ .875T	83.30	116.2	224.3	8.0	14.6	7.6	24.50	24.88	.625	13.00	.875	13.83
24X10X .688/ .875T	85.85	144.4	224.1	3.0	15.3	9.8	25.25	24.88	.688	10.00	.875	17.29
21X14X .625/ .875T	86.29	117.4	237.0	7.9	14.8	7.3	25.38	21.88	.625	14.00	.875	13.83
22X4 9X .688/1.125T	86.70	146.0	225.6	9.0	15.4	10.0	25.50	25.13	.688	8.00	1.125	17.46
24X11X .688/ .875T	88.84	146.5	238.7	9.0	15.6	9.6	26.13	24.88	.688	11.00	.875	17.29
24X4 9X .688/1.125T	90.54	148.6	244.4	9.0	15.8	9.6	26.63	25.13	.688	9.00	1.125	17.46
24X12X .688/ .875T	91.80	148.4	253.5	9.0	15.9	9.3	27.00	24.88	.688	12.00	.875	17.29
24X13X .688/ .975T	94.79	150.1	268.2	9.0	16.1	9.0	27.88	24.88	.688	13.00	.875	17.29
24X11X .688/1.125T	98.19	153.1	281.1	9.0	16.4	8.9	28.88	25.13	.688	11.00	1.125	17.46
27X 8X .750/1.125T	99.45	183.9	269.4	9.9	16.9	11.5	29.25	28.13	.750	8.00	1.125	21.29
27X11X .750/ .875T	101.59	184.8	283.9	9.9	17.0	11.1	29.88	27.88	.750	11.00	.875	21.10
27X 9X .750/1.125T	103.29	187.5	290.2	10.0	17.2	11.1	30.38	28.13	.750	9.00	1.125	21.29
27X12X .750/ .875T	104.55	187.4	300.3	9.9	17.3	10.8	30.75	27.88	.750	12.00	.875	21.10
27X10X .750/1.125T	107.10	190.6	310.9	9.9	17.6	10.8	31.50	28.13	.750	10.00	1.125	21.29
27X11X .750/1.125T	110.94	193.5	331.5	10.0	17.9	10.5	32.63	28.13	.750	11.00	1.125	21.29
27X 9X .875/1.375T	122.40	213.6	340.7	9.9	17.6	11.0	36.00	31.38	.875	9.00	1.375	25.05
30X10X .875/1.375T	136.00	257.1	419.2	10.9	19.6	12.0	40.00	31.38	.875	10.00	1.375	27.68
30X13X .875/1.125T	138.99	258.1	441.2	10.9	19.8	11.6	40.88	31.13	.875	13.00	1.125	27.46
30X11X .875/1.375T	140.69	261.1	446.6	10.9	20.0	11.7	41.38	31.13	.875	11.00	1.375	27.68
30X14X .875/1.125T	142.80	261.1	464.0	10.9	20.1	11.3	42.00	31.13	.875	14.00	1.125	27.46
30X14X .875/1.375T	154.70	270.9	529.0	10.9	20.9	10.7	45.50	31.38	.875	14.00	1.375	27.68
33X10X1.000/1.500T	163.20	332.6	520.7	7052.5	11.9	21.2	48.00	34.50	1.000	10.00	1.500	34.75
33X11X1.000/1.375T	163.64	332.2	525.5	7048.3	11.8	21.2	48.13	34.38	1.000	11.00	1.375	34.63
36X13X1.000/1.125T	172.14	379.4	584.3	8597.8	12.8	22.7	50.63	37.13	1.000	13.00	1.125	37.38
33X13X1.000/1.375T	172.99	341.4	586.0	7470.6	11.9	21.9	50.88	34.38	1.000	13.00	1.375	34.63
36X11X1.000/1.375T	173.84	383.2	591.6	8751.3	12.8	22.8	51.13	37.38	1.000	11.00	1.375	37.63
36X10X1.000/1.750T	181.90	395.6	640.6	9294.1	12.9	23.5	53.50	37.75	1.000	10.00	1.750	38.00
33X16X1.000/1.375T	187.00	352.8	676.1	8028.0	11.9	22.8	55.00	34.38	1.000	16.00	1.375	34.63

0.2500 - 1/4 in.



•281 IN. PLATE (AREA= 2.69 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH THICK	
3X 2X .125/.188T	2.55	6.4	1.5	4.3	1.1	.7	2.8	.75	3.19	.125	2.00	.100
4X 2X .125/.188T	2.99	8.7	2.2	7.7	1.5	.9	3.6	.88	4.19	.125	2.00	.100
3X 3X .125/.188T	3.20	6.9	2.1	5.6	1.2	.8	2.7	.94	3.19	.125	3.00	.100
4X 3X .125/.188T	3.60	9.3	2.9	9.9	1.6	1.1	3.4	1.06	4.19	.125	3.00	.100
4X 2X .188/.313T	4.63	9.6	3.4	11.5	1.7	1.2	3.4	1.38	4.31	.188	2.00	.313
5X 2X .188/.250T	4.90	11.6	3.9	16.0	2.0	1.4	4.2	1.44	5.25	.188	2.00	.250
3X 3X .188/.313T	5.10	7.6	3.3	8.3	1.4	1.1	2.5	1.50	3.31	.188	3.00	.313
5X 2X .188/.313T	5.30	12.1	4.4	18.1	2.1	1.5	4.1	1.56	5.31	.188	2.00	.313
6X 2X .188/.313T	5.95	14.7	5.6	26.8	2.5	1.8	4.8	1.75	6.31	.188	2.00	.313
6X 3X .188/.250T	6.39	15.0	6.4	29.2	2.5	1.9	4.6	1.88	6.25	.188	3.00	.250
5X 4X .188/.250T	6.60	12.8	6.3	23.3	2.2	1.8	3.7	1.94	5.25	.188	4.00	.250
4X 4X .188/.313T	6.90	10.6	5.8	17.2	1.9	1.6	3.0	2.00	4.31	.188	4.00	.313
6X 3X .188/.313T	7.00	15.5	7.4	32.9	2.6	2.1	4.5	2.06	6.31	.188	3.00	.313
6X 4X .188/.250T	7.24	15.6	7.8	33.9	2.7	2.2	4.4	2.13	6.25	.188	4.00	.250
5X 4X .188/.313T	7.45	13.3	7.4	26.6	2.3	2.0	3.6	2.19	5.31	.188	4.00	.313
6X 4X .188/.313T	8.09	16.0	9.2	38.4	2.8	2.4	4.2	2.39	6.31	.188	5.00	.313
5X 5X .188/.313T	8.50	13.6	8.9	30.1	2.4	2.2	3.4	2.50	5.31	.188	5.00	.313
7X 3X .250/.313T	9.15	18.4	9.6	47.9	3.0	2.6	5.0	2.69	7.31	.250	3.00	.313
6X 3X .250/.438T	9.55	16.5	9.8	41.4	2.7	2.5	4.2	2.81	6.44	.250	3.00	.438
7X 3X .250/.375T	9.79	18.9	10.7	52.4	3.1	2.8	4.9	2.88	7.38	.250	3.00	.375
8X 3X .250/.313T	10.00	21.3	11.4	63.8	3.4	3.0	5.6	2.94	8.31	.250	3.00	.313
7X 4X .250/.313T	10.20	19.1	11.6	54.7	3.1	2.9	4.7	3.00	7.31	.250	4.00	.313
7X 3X .250/.438T	10.40	19.4	11.8	56.7	3.1	2.9	4.8	3.06	7.44	.250	3.00	.438
9X 3X .250/.375T	10.54	21.9	12.7	69.5	3.5	3.2	5.5	3.13	8.38	.250	3.00	.375
9X 3X .250/.313T	10.95	24.2	13.3	82.2	3.7	3.4	6.2	3.19	9.31	.250	3.00	.313
8X 4X .250/.313T	11.05	22.1	13.7	72.5	3.5	3.3	5.3	3.25	8.31	.250	4.00	.313
7X 5X .250/.313T	11.25	19.6	13.5	60.9	3.2	3.1	4.5	3.31	7.31	.250	5.00	.313
8X 3X .250/.438T	11.25	22.4	13.9	74.9	3.5	3.3	5.4	3.31	8.44	.250	3.00	.438
9X 3X .250/.375T	11.49	24.3	14.7	89.3	3.8	3.6	6.1	3.38	9.38	.250	3.00	.375
9X 4X .250/.313T	11.90	25.1	15.8	93.0	3.9	3.7	5.9	3.50	9.31	.250	4.00	.313
9X 3X .250/.438T	12.10	25.5	16.2	96.1	3.9	3.8	5.9	3.56	9.44	.250	3.00	.438
8X 5X .250/.313T	12.10	22.7	15.9	80.3	3.6	3.5	5.1	3.56	8.31	.250	5.00	.313
9X 4X .250/.375T	12.75	25.8	17.8	101.6	4.0	3.9	5.7	3.75	9.38	.250	5.00	.375
9X 5X .250/.313T	12.95	25.8	18.3	102.9	4.0	4.0	5.6	3.81	9.31	.250	5.00	.313
8X 5X .250/.375T	13.19	23.3	18.1	88.2	3.7	3.8	4.9	3.88	8.38	.250	5.00	.375
7X 5X .250/.438T	13.40	20.6	17.4	72.8	3.3	3.5	4.2	3.94	7.44	.250	5.00	.438
9X 4X .250/.438T	13.60	26.4	19.6	109.3	4.0	4.1	5.6	4.00	9.44	.250	4.00	.438
9X 5X .250/.375T	14.04	26.5	20.7	112.4	4.1	4.2	5.4	4.13	9.38	.250	5.00	.375
8X 5X .250/.438T	14.25	23.8	20.2	95.2	3.7	4.0	4.7	4.19	8.44	.250	5.00	.438
8X 6X .250/.375T	14.45	23.8	20.7	96.0	3.7	4.0	4.6	4.25	8.38	.250	6.00	.375
7X 6X .250/.438T	14.89	21.0	20.1	79.2	3.3	3.8	3.9	4.38	7.44	.250	6.00	.438
9X 5X .250/.438T	15.10	27.1	23.2	121.3	4.1	4.5	5.2	4.44	9.44	.250	5.00	.438
9X 6X .250/.375T	15.30	27.0	23.7	122.0	4.1	4.5	5.2	4.50	9.38	.250	6.00	.375
10X 4X .313/.375T	15.74	29.7	21.3	132.5	4.3	4.5	6.2	4.63	10.38	.313	4.00	.375
8X 6X .250/.438T	15.74	24.2	23.3	103.5	3.8	4.3	4.5	4.63	8.44	.250	6.00	.438

0.2813 - 9/32 in.





.281 IN. PLATE (AREA= 2.69 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	FLANGE	THICK	AREA	THICK	FLANGE	THICK	AREA	THICK	AREA	THICK
12X 8X	.375/ .656T	33.15	45.1	64.6	343.6	5.3	7.6	5.3	9.75	12.66	.375	8.00	.656		.656	4.85							
14X 7X	.438/ .531T	33.46	54.3	62.1	429.0	5.9	7.9	6.9	9.04	14.53	.438	7.00	.531		.531	6.49							
16X 5X	.438/ .594T	33.90	62.5	63.5	531.5	6.5	8.5	8.4	9.97	16.59	.438	5.00	.594		.594	7.39							
14X 6X	.438/ .656T	34.20	54.9	64.0	441.6	5.9	8.0	6.9	10.06	14.66	.438	6.00	.656		.656	6.54							
16X 6X	.438/ .531T	34.65	63.1	66.5	544.2	6.5	8.6	8.2	10.19	16.53	.438	6.00	.531		.531	7.36							
16X 5X	.438/ .656T	34.95	63.6	67.1	553.2	6.5	8.7	8.2	10.28	16.66	.438	5.00	.656		.656	7.42							
14X 7X	.438/ .594T	34.95	55.2	66.7	449.1	5.9	8.1	6.7	10.28	14.59	.438	7.00	.594		.594	6.51							
14X 8X	.438/ .531T	35.29	55.2	68.1	451.5	5.9	8.2	6.6	10.38	14.53	.438	8.00	.531		.531	6.49							
16X 6X	.438/ .594T	35.90	64.2	71.0	568.7	6.6	8.9	8.0	10.56	16.59	.438	6.00	.594		.594	7.39							
16X 5X	.438/ .719T	36.01	64.5	70.8	574.1	6.6	8.9	8.1	10.59	16.72	.438	5.00	.719		.719	7.45							
16X 7X	.438/ .531T	36.45	64.4	73.2	576.2	6.6	8.9	7.9	10.72	16.53	.438	7.00	.531		.531	7.36							
14X 8X	.438/ .594T	36.99	56.1	73.3	472.8	5.9	8.4	6.4	10.91	14.53	.438	8.00	.594		.594	6.51							
16X 7X	.438/ .594T	37.94	65.6	78.4	602.4	6.6	9.2	7.7	11.16	16.59	.438	7.00	.594		.594	7.39							
16X 6X	.438/ .719T	38.45	66.2	79.8	605.4	6.6	9.2	7.6	11.25	16.53	.438	6.00	.719		.719	7.36							
16X 7X	.438/ .656T	39.41	66.6	83.5	615.0	6.6	9.3	7.7	11.31	16.72	.438	6.00	.656		.656	7.45							
16X 8X	.438/ .594T	39.95	66.7	85.8	633.4	6.6	9.5	7.4	11.75	16.59	.438	8.00	.594		.594	7.39							
16X 9X	.438/ .531T	40.05	66.6	86.5	632.7	6.6	9.5	7.3	11.78	16.53	.438	9.00	.531		.531	7.36							
16X 7X	.438/ .719T	40.90	67.5	88.7	652.1	6.7	9.7	7.3	12.03	16.72	.438	7.00	.719		.719	7.45							
16X 8X	.438/ .656T	41.65	67.8	91.7	660.1	6.6	9.7	7.2	12.25	16.66	.438	8.00	.656		.656	7.42							
18X 5X	.500/ .594T	41.75	77.6	81.1	750.9	7.1	9.7	9.3	12.38	18.66	.500	5.00	.594		.594	9.47							
16X 9X	.438/ .594T	41.36	67.8	93.3	662.1	6.6	9.8	7.1	12.34	16.59	.438	9.00	.594		.594	7.39							
16X 5X	.500/ .875T	42.09	69.6	81.9	645.6	6.5	9.3	7.9	12.38	16.88	.500	5.00	.875		.875	8.58							
18X 6X	.500/ .594T	42.70	78.4	95.4	771.2	7.1	9.8	9.0	12.56	18.59	.500	6.00	.594		.594	9.44							
18X 5X	.500/ .719T	42.81	78.7	85.1	777.3	7.1	9.9	9.1	12.59	18.72	.500	5.00	.719		.719	9.50							
14X 10X	.438/ .656T	43.15	58.5	92.6	535.6	5.9	9.2	5.8	12.69	14.66	.438	10.00	.656		.656	6.54							
16X 8X	.438/ .719T	43.35	68.7	97.6	689.7	6.7	10.0	7.0	12.75	16.72	.438	8.00	.719		.719	7.45							
16X 9X	.438/ .656T	43.89	68.8	99.8	689.7	6.6	10.0	6.9	12.91	16.66	.438	9.00	.656		.656	7.42							
18X 6X	.500/ .656T	44.00	79.7	90.2	801.2	7.2	10.1	8.9	12.94	18.66	.500	6.00	.656		.656	9.47							
16X 10X	.438/ .594T	44.00	68.6	100.7	688.8	6.6	10.0	6.8	12.94	16.59	.438	10.00	.594		.594	7.39							
14X 11X	.438/ .656T	45.36	59.1	99.6	554.1	5.9	9.4	5.6	13.34	14.66	.438	11.00	.656		.656	6.54							
16X 9X	.438/ .719T	45.80	69.7	106.5	716.2	6.7	10.3	6.7	13.47	16.72	.438	9.00	.719		.719	7.45							
16X 10X	.438/ .656T	46.18	69.6	107.9	717.1	6.6	10.3	6.6	13.56	16.66	.438	10.00	.656		.656	7.42							
18X 7X	.500/ .719T	47.70	82.7	105.0	878.7	7.2	10.6	8.4	14.03	18.72	.500	7.00	.719		.719	9.50							
18X 6X	.500/ .875T	48.45	83.6	107.0	899.2	7.3	10.6	8.4	14.25	18.66	.500	6.00	.875		.875	9.58							
18X 8X	.500/ .719T	50.15	84.2	114.7	922.9	7.3	11.0	8.0	14.75	18.72	.500	8.00	.719		.719	9.58							
18X 9X	.500/ .656T	50.69	84.3	117.3	929.3	7.3	11.0	7.9	14.91	18.66	.500	9.00	.656		.656	9.47							
18X 10X	.500/ .594T	50.88	84.2	118.3	928.3	7.3	11.0	7.8	14.94	18.59	.500	10.00	.594		.594	9.44							
18X 7X	.500/ .875T	51.44	85.4	119.7	951.7	7.3	11.1	8.0	15.13	18.66	.500	7.00	.875		.875	9.58							
18X 9X	.500/ .719T	52.60	85.6	124.4	963.4	7.3	11.3	7.7	15.47	18.72	.500	9.00	.719		.719	9.50							
18X 10X	.500/ .656T	52.90	85.6	126.1	965.4	7.3	11.3	7.7	15.56	18.66	.500	10.00	.656		.656	9.47							
18X 8X	.500/ .875T	54.40	86.9	130.5	999.7	7.3	11.5	7.7	16.00	18.66	.500	8.00	.875		.875	9.58							
18X 11X	.500/ .656T	55.15	86.6	135.0	999.4	7.3	11.5	7.4	16.22	18.66	.500	11.00	.656		.656	9.47							
18X 11X	.500/ .719T	57.49	87.8	144.8	1036.3	7.3	11.8	7.2	16.91	18.72	.500	11.00	.719		.719	9.58							

0.2813 - 9/32 in.

.281 IN. PLATE (AREA= 2.69 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
18X12X .500/.719T	59.94	88.7	153.6	1068.6	7.3	12.0	7.0	17.63	18.72	.500	12.00	.719	9.50
18X10X .500/.875T	60.35	89.4	153.7	1083.0	7.3	12.1	7.0	17.75	18.88	.500	10.00	.875	9.58
21X 8X .625/.875T	68.44	118.3	164.2	1523.8	8.2	12.9	9.3	20.13	21.88	.625	8.00	.875	13.85
21X10X .625/.750T	70.14	119.1	173.0	1553.8	8.2	13.0	9.0	20.63	21.75	.625	10.00	.750	13.77
21X 9X .625/.875T	71.40	120.4	177.6	1589.8	8.2	13.2	9.0	21.00	21.88	.625	9.00	.875	13.85
21X11X .625/.750T	72.69	120.7	184.7	1608.1	8.2	13.3	8.7	21.38	21.75	.625	11.00	.750	13.77
21X10X .625/.875T	74.39	122.2	191.0	1651.6	8.2	13.5	8.6	21.88	21.88	.625	10.00	.875	13.85
21X 9X .625/1.125T	79.85	125.7	209.1	1759.3	8.2	14.0	8.4	23.25	22.13	.625	9.00	1.125	14.81
21X12X .625/.875T	80.34	125.3	217.3	1761.2	8.2	14.1	8.1	23.63	21.88	.625	12.00	.875	13.85
24X 9X .688/.875T	82.89	153.1	215.0	2249.9	9.1	14.7	10.5	24.38	24.88	.688	9.00	.875	17.31
21X13X .625/.875T	83.30	126.6	230.6	1811.2	8.2	14.3	7.9	24.50	21.88	.625	13.00	.875	13.85
24X10X .688/.875T	85.85	155.6	230.0	2335.1	9.1	15.0	10.2	25.25	24.88	.688	10.00	.875	17.31
21X14X .625/.875T	86.29	127.8	243.6	1857.7	8.1	14.5	7.6	25.38	21.88	.625	14.00	.875	13.85
24X 8X .688/1.125T	86.70	157.3	231.5	2380.3	9.2	15.1	10.3	25.50	25.13	.688	8.00	1.125	17.48
24X11X .688/.875T	88.84	157.8	244.9	2415.0	9.2	15.3	9.9	26.13	24.88	.688	11.00	.875	17.31
24X 9X .688/1.125T	90.54	160.1	250.7	2482.9	9.2	15.5	9.9	26.63	25.13	.688	9.00	1.125	17.48
24X12X .688/.875T	91.80	159.8	260.0	2490.8	9.2	15.6	9.6	27.00	24.88	.688	12.00	.875	17.31
24X13X .688/.875T	94.79	161.7	275.0	2561.9	9.2	15.8	9.3	27.88	24.88	.688	13.00	.875	17.31
24X11X .688/1.125T	98.19	164.8	288.3	2664.8	9.2	16.2	9.2	28.88	25.13	.688	11.00	1.125	17.48
27X 8X .750/1.125T	99.45	196.4	275.9	3259.0	10.1	16.6	11.8	29.25	26.13	.750	8.00	1.125	21.31
27X11X .750/.875T	101.59	197.3	290.6	3308.5	10.1	16.8	11.4	29.88	27.88	.750	11.00	.875	21.12
27X 9X .750/1.125T	103.29	200.0	297.1	3396.6	10.1	17.0	11.4	30.38	28.13	.750	9.00	1.125	21.31
27X12X .750/.875T	104.55	208.0	307.4	3411.8	10.1	17.1	11.1	30.75	27.88	.750	12.00	.875	21.12
27X10X .750/1.125T	107.10	203.4	318.2	3524.8	10.2	17.3	11.1	31.50	28.13	.750	10.00	1.125	21.31
27X11X .750/1.125T	110.94	206.3	339.2	3644.9	10.2	17.7	10.7	32.63	28.13	.750	11.00	1.125	21.31
27X 9X .875/1.375T	122.40	226.2	348.2	3930.5	10.1	17.4	11.3	36.00	28.38	.875	9.00	1.375	25.08
30X10X .875/1.375T	136.00	271.1	427.7	5254.2	11.1	19.4	12.3	40.00	31.38	.875	10.00	1.375	27.78
30X13X .875/1.125T	138.99	272.2	450.0	5327.8	11.1	19.6	11.8	40.88	31.13	.875	13.00	1.125	27.48
30X14X .875/1.375T	140.69	275.3	455.6	5433.1	11.1	19.7	11.9	41.38	31.38	.875	11.00	1.375	27.78
30X11X .875/1.125T	142.80	275.3	473.3	5467.5	11.1	19.9	11.6	42.00	31.13	.875	14.00	1.125	27.48
30X14X .875/1.375T	154.70	285.4	539.4	5910.0	11.1	20.7	11.0	45.50	31.38	.875	14.00	1.375	27.78
33X10X1.000/1.500T	163.20	347.7	530.0	7302.7	12.0	21.0	13.8	48.00	34.50	1.000	10.00	1.500	34.78
33X11X1.000/1.375T	163.64	347.3	534.8	7298.8	12.0	21.0	13.6	48.13	34.38	1.000	11.00	1.375	34.66
36X13X1.000/1.125T	172.14	395.6	594.0	8883.9	12.9	22.5	15.0	50.63	37.13	1.000	13.00	1.125	37.41
33X13X1.000/1.375T	172.99	356.0	596.1	7737.2	12.0	21.7	13.0	50.88	34.38	1.000	13.00	1.375	34.66
36X11X1.000/1.375T	173.84	399.6	601.5	9041.8	13.0	22.6	15.0	51.13	37.38	1.000	11.00	1.375	37.66
36X10X1.000/1.750T	181.90	412.3	651.2	9601.6	13.1	23.3	14.7	53.50	37.75	1.000	10.00	1.750	38.03
33X16X1.000/1.375T	187.00	368.6	687.5	8316.6	12.0	22.6	12.1	55.00	34.38	1.000	16.00	1.375	34.66

0.2813 - 9/32 in.



.313 IN. PLATE (AREA= 3.32 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH THICK	
3X 2X .125/.188T	2.55	7.4	1.6	4.5	1.1	.6	2.9	.75	3.19	.125	2.00	.44
4X 2X .125/.188T	2.99	10.2	2.2	8.1	1.4	.8	3.7	.88	4.19	.125	2.00	.56
3X 3X .125/.188T	3.20	8.1	2.1	5.9	1.2	.7	2.8	.94	3.19	.125	3.00	.44
4X 3X .125/.188T	3.60	11.0	2.9	10.4	1.5	.9	3.6	1.06	4.19	.125	3.00	.56
4X 2X .188/.250T	4.69	11.3	3.4	12.2	1.6	1.1	3.5	1.30	4.31	.188	2.00	.87
5X 2X .188/.250T	4.90	13.8	3.9	17.0	1.9	1.2	4.3	1.44	5.25	.188	2.00	1.05
3X 3X .188/.313T	5.10	9.0	3.4	8.9	1.4	1.0	2.6	1.50	3.31	.188	3.00	.60
5X 2X .188/.313T	5.30	14.3	4.5	19.3	2.0	1.3	4.3	1.56	5.31	.188	2.00	1.06
6X 2X .188/.313T	5.95	17.4	5.7	28.5	2.4	1.6	5.0	1.75	6.31	.188	2.00	1.23
6X 3X .188/.250T	6.39	17.8	6.5	31.1	2.4	1.7	4.8	1.88	6.25	.188	3.00	1.23
5X 4X .188/.250T	6.60	15.3	6.4	25.0	2.2	1.6	3.9	1.94	5.25	.188	4.00	1.85
4X 4X .188/.313T	6.80	12.6	5.9	18.6	1.9	1.5	3.1	2.00	4.31	.188	4.00	.87
6X 3X .188/.313T	7.00	18.4	7.5	35.3	2.6	1.9	4.7	2.06	6.31	.188	3.00	1.25
6X 4X .188/.250T	7.24	18.5	7.9	36.4	2.6	2.0	4.6	2.13	6.25	.188	4.00	1.23
5X 4X .188/.313T	7.45	15.8	7.6	28.7	2.3	1.8	3.8	2.19	5.31	.188	4.00	1.86
6X 4X .188/.313T	8.03	19.1	9.3	41.5	2.7	2.2	4.5	2.38	6.31	.188	4.00	1.25
5X 5X .188/.313T	8.50	16.3	9.1	32.7	2.4	2.0	3.6	2.50	5.31	.188	5.00	1.86
7X 3X .250/.313T	9.15	21.8	9.8	51.5	2.9	2.4	5.3	2.69	7.31	.250	3.00	1.91
6X 3X .250/.438T	9.55	19.6	10.0	44.8	2.7	2.3	4.5	2.81	6.44	.250	3.00	1.69
7X 3X .250/.375T	9.79	22.4	10.9	56.6	3.0	2.5	5.2	2.88	7.38	.250	3.00	1.92
8X 3X .250/.313T	10.00	25.1	11.7	68.7	3.3	2.7	5.9	2.94	8.31	.250	3.00	2.16
7X 4X .250/.313T	10.20	22.6	11.8	59.2	3.1	2.6	5.0	3.00	7.31	.250	4.00	1.91
7X 3X .250/.438T	10.40	23.0	12.1	61.4	3.1	2.7	5.1	3.06	7.44	.250	3.00	1.94
8X 3X .250/.375T	10.64	25.8	13.0	75.1	3.4	2.9	5.8	3.13	8.38	.250	3.00	2.17
9X 3X .250/.313T	10.85	28.5	13.6	88.6	3.7	3.1	6.5	3.19	9.31	.250	3.00	2.41
8X 4X .250/.313T	11.05	26.1	14.0	78.4	3.5	3.0	5.6	3.25	8.31	.250	4.00	2.16
7X 5X .250/.313T	11.25	23.3	13.8	66.1	3.2	2.8	4.8	3.31	7.31	.250	5.00	1.91
8X 3X .250/.438T	11.25	26.5	14.3	81.1	3.5	3.1	5.7	3.31	8.44	.250	3.00	2.19
9X 3X .250/.375T	11.49	29.3	15.1	96.4	3.8	3.3	6.4	3.38	9.38	.250	3.00	2.42
9X 4X .250/.313T	11.90	29.6	16.2	104.0	3.9	3.5	6.2	3.50	9.31	.250	4.00	2.41
8X 5X .250/.313T	12.10	30.0	16.5	104.0	3.9	3.5	6.3	3.56	9.44	.250	3.00	2.44
8X 5X .250/.313T	12.10	26.8	16.2	87.2	3.6	3.2	5.4	3.56	8.31	.250	5.00	2.16
9X 4X .250/.375T	12.75	30.4	18.2	110.3	3.9	3.6	6.1	3.75	9.38	.250	4.00	2.42
9X 5X .250/.313T	12.95	30.5	18.8	111.7	4.0	3.7	6.0	3.81	9.31	.250	5.00	2.41
8X 5X .250/.438T	13.19	27.6	18.5	96.2	3.7	3.5	5.2	3.88	8.38	.250	5.00	2.17
9X 5X .250/.375T	13.40	24.4	17.6	79.7	3.3	3.3	4.5	3.94	7.44	.250	5.00	1.94
9X 4X .250/.438T	13.60	31.1	20.1	119.0	4.0	3.8	5.9	4.00	9.44	.250	4.00	2.44
9X 5X .250/.375T	14.04	31.3	21.2	122.5	4.1	3.9	5.8	4.13	9.38	.250	5.00	2.42
8X 5X .250/.438T	14.25	28.1	20.6	104.2	3.7	3.7	5.1	4.19	8.44	.250	5.00	2.19
8X 6X .250/.375T	14.45	28.1	21.2	105.1	3.7	3.7	5.0	4.25	8.38	.250	6.00	2.17
7X 6X .250/.438T	14.89	24.9	20.5	87.2	3.4	3.5	4.2	4.38	7.44	.250	6.00	1.94
9X 5X .250/.438T	15.10	31.9	23.7	132.6	4.1	4.2	5.6	4.44	9.44	.250	5.00	2.44
9X 6X .250/.375T	15.30	31.9	24.2	133.4	4.1	4.2	5.5	4.50	9.38	.250	6.00	2.42
10X 4X .313/.375T	15.74	34.7	21.9	143.7	4.3	4.1	6.6	4.63	10.38	.313	4.00	3.35
8X 6X .250/.438T	15.74	28.7	23.8	113.8	3.8	4.0	4.8	4.63	8.44	.250	6.00	2.19

0.3125 - 5/16 in.

313 IN. PLATE (AREA= 3.32 SQ.IN.)

***** BEAM DIMENSIONS *****														
SECTION MODULUS														
NOMINAL SIZE		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	SHEAR AREA
7X 7X	.250/ .438T	16.35	25.2	23.3	94.0	3.4	3.7	4.0	4.81	7.44	.250	7.00	.438	1.94
10X 4X	.313/ .438T	16.59	35.5	24.0	154.2	4.3	4.3	6.4	4.88	10.44	.313	4.00	.438	3.37
9X 6X	.250/ .438T	16.59	32.6	27.2	144.6	4.2	4.4	5.3	4.88	9.44	.250	6.00	.438	2.44
10X 5X	.313/ .375T	17.00	35.8	25.3	158.4	4.4	4.4	6.3	5.00	10.38	.313	5.00	.375	3.35
8X 7X	.250/ .438T	17.20	29.1	26.9	122.4	3.8	4.2	4.5	5.06	8.44	.250	7.00	.438	2.19
10X 4X	.313/ .500T	17.44	36.3	26.2	168.4	4.4	4.5	6.3	5.13	10.50	.313	4.00	.500	3.38
9X 7X	.250/ .438T	18.05	33.1	30.7	155.3	4.2	4.7	5.1	5.31	9.44	.250	7.00	.438	2.44
10X 6X	.313/ .375T	18.29	36.6	28.6	171.5	4.4	4.7	6.0	5.38	10.38	.313	6.00	.375	3.35
10X 5X	.313/ .500T	19.14	37.3	30.5	181.5	4.5	4.9	5.9	5.63	10.50	.313	5.00	.500	3.38
10X 6X	.313/ .438T	19.55	37.4	31.7	184.5	4.5	4.9	5.8	5.75	10.44	.313	6.00	.438	3.37
10X 5X	.313/ .563T	20.20	37.9	33.1	192.3	4.6	5.1	5.8	5.94	10.56	.313	5.00	.563	3.40
10X 6X	.313/ .500T	20.84	38.1	34.9	196.9	4.6	5.2	5.6	6.13	10.50	.313	6.00	.500	3.38
10X 7X	.313/ .438T	21.05	38.1	35.5	197.6	4.6	5.2	5.6	6.19	10.44	.313	7.00	.438	3.37
9X 7X	.313/ .500T	21.45	34.4	34.8	189.7	4.2	4.9	4.9	6.31	9.50	.313	7.00	.500	3.87
12X 4X	.375/ .469T	21.69	45.3	33.2	244.8	5.0	5.4	7.4	6.38	12.47	.375	4.00	.469	4.79
10X 6X	.313/ .563T	22.10	38.7	38.0	208.5	4.6	5.4	5.5	6.50	10.56	.313	6.00	.563	3.40
10X 7X	.313/ .500T	22.54	38.7	39.2	210.6	4.6	5.4	5.4	6.63	10.50	.313	7.00	.500	3.38
12X 4X	.375/ .531T	22.54	46.1	35.6	226.3	5.1	5.6	7.2	6.63	12.53	.375	4.00	.531	4.82
9X 7X	.313/ .563T	22.95	35.0	38.1	180.0	4.2	5.1	4.7	6.75	9.56	.313	7.00	.563	3.09
9X 8X	.313/ .500T	23.15	34.9	38.7	180.1	4.2	5.2	4.7	6.81	9.50	.313	8.00	.500	3.07
12X 5X	.375/ .469T	23.26	46.6	38.0	267.8	5.1	5.7	7.0	6.84	12.47	.375	5.00	.469	4.79
12X 4X	.375/ .594T	23.39	47.0	38.1	271.4	5.2	5.8	7.1	6.88	12.59	.375	4.00	.594	4.84
10X 7X	.313/ .563T	24.00	39.3	42.8	222.8	4.6	5.7	5.2	7.06	10.56	.313	7.00	.563	3.40
10X 8X	.313/ .500T	24.24	39.3	43.6	223.4	4.6	5.7	5.1	7.13	10.50	.313	8.00	.500	3.38
12X 4X	.375/ .656T	24.24	47.7	40.4	233.7	5.2	5.9	7.0	7.13	12.66	.375	4.00	.656	4.86
9X 8X	.313/ .563T	24.85	35.4	42.4	190.5	4.2	5.4	4.5	7.31	9.56	.313	8.00	.563	3.09
12X 6X	.375/ .469T	24.85	47.8	42.8	208.5	5.2	6.0	6.7	7.31	12.47	.375	6.00	.469	4.79
12X 5X	.375/ .594T	25.40	48.3	44.0	237.3	5.2	6.1	6.8	7.47	12.59	.375	5.00	.594	4.84
10X 8X	.313/ .563T	25.94	39.9	47.7	236.1	4.6	5.9	4.9	7.63	10.56	.313	8.00	.563	3.40
12X 5X	.375/ .656T	26.45	49.1	47.0	311.4	5.3	6.3	6.6	7.78	12.66	.375	5.00	.656	4.86
12X 7X	.375/ .469T	26.45	48.7	47.5	307.5	5.3	6.3	6.5	7.78	12.47	.375	7.00	.469	4.79
12X 6X	.375/ .594T	27.40	49.5	50.0	320.7	5.3	6.5	6.4	8.06	12.59	.375	6.00	.594	4.84
12X 7X	.375/ .531T	27.95	49.6	51.8	325.4	5.3	6.6	6.3	8.22	12.53	.375	7.00	.531	4.82
12X 6X	.375/ .656T	28.70	50.2	53.5	335.8	5.3	6.7	6.3	8.44	12.66	.375	6.00	.656	4.86
12X 7X	.375/ .594T	29.44	50.4	55.9	341.9	5.3	6.8	6.1	8.66	12.59	.375	7.00	.594	4.84
12X 8X	.375/ .531T	29.75	50.3	57.1	343.5	5.3	6.8	6.0	8.75	12.53	.375	8.00	.531	4.82
14X 5X	.438/ .531T	29.85	58.9	51.8	408.8	5.8	6.9	7.9	8.78	14.53	.438	5.00	.531	6.50
14X 5X	.438/ .594T	30.91	59.9	55.1	427.8	5.9	7.1	7.8	9.09	14.59	.438	5.00	.594	6.53
12X 8X	.375/ .594T	31.45	51.1	61.8	361.1	5.4	7.1	5.8	9.25	12.59	.375	8.00	.594	4.84
12X 9X	.375/ .531T	31.55	51.0	62.5	360.6	5.3	7.1	5.8	9.28	12.53	.375	9.00	.531	4.82
14X 6X	.438/ .531T	31.65	60.4	57.9	438.6	5.9	7.3	7.6	9.31	14.53	.438	6.00	.531	6.50
14X 5X	.438/ .656T	31.99	60.9	58.5	446.6	5.9	7.3	7.6	9.41	14.66	.438	5.00	.656	6.56
16X 5X	.438/ .531T	32.84	69.4	61.6	569.6	6.5	7.9	8.9	9.66	16.53	.438	5.00	.531	7.38
14X 6X	.438/ .594T	32.95	61.4	61.9	459.4	5.9	7.5	7.4	9.69	14.59	.438	6.00	.594	6.53
14X 5X	.438/ .713T	33.05	61.8	61.8	464.3	6.0	7.5	7.5	9.72	14.72	.438	5.00	.713	6.58

0.3125 - 5/16 in.



0.3125 IN. PLATE (AREA= 3.32 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	THICK	
12X 8X .375/.656T	33.15	51.8	66.5	377.9	5.4	7.3	5.7	9.75	12.66	.375	8.00	.656	4.86
14X 7X .438/.531T	33.46	61.6	64.0	466.0	6.0	7.6	7.3	9.84	14.53	.438	7.00	.531	6.50
16X 5X .438/.594T	33.90	70.6	65.4	574.2	6.6	8.1	8.8	9.97	16.59	.438	5.00	.594	7.40
14X 6X .438/.656T	34.20	62.4	65.9	479.9	6.0	7.7	7.3	10.06	14.66	.438	6.00	.656	6.56
16X 6X .438/.531T	34.65	71.2	68.6	586.3	6.6	8.3	8.6	10.19	16.53	.438	6.00	.531	7.38
16X 5X .438/.656T	34.95	71.8	69.2	598.0	6.6	8.3	8.6	10.28	16.66	.438	5.00	.656	7.43
14X 7X .438/.594T	34.95	62.6	68.7	488.4	6.0	7.8	7.1	10.28	14.59	.438	7.00	.594	6.53
14X 8X .438/.531T	35.29	62.7	70.1	491.1	6.0	7.8	7.0	10.38	14.53	.438	8.00	.531	6.50
16X 8X .438/.594T	35.90	72.5	73.2	615.3	6.7	8.5	8.4	10.56	16.59	.438	6.00	.594	7.40
16X 5X .438/.719T	36.01	72.8	73.0	621.1	6.7	8.5	8.5	10.59	16.72	.438	5.00	.719	7.46
16X 7X .438/.531T	36.45	72.7	75.4	623.6	6.7	9.6	8.3	10.72	16.53	.438	7.00	.531	7.38
14X 9X .438/.594T	36.99	63.7	75.5	514.9	6.0	8.1	6.8	10.88	14.59	.438	8.00	.594	6.53
14X 8X .438/.531T	37.09	63.6	76.2	514.4	6.0	8.1	6.8	10.31	14.53	.438	9.00	.531	6.50
16X 7X .438/.594T	37.94	74.0	80.8	652.7	6.7	8.8	8.1	11.16	16.59	.438	7.00	.594	7.40
16X 8X .438/.531T	38.25	74.0	82.2	656.1	6.7	8.9	8.0	11.25	16.53	.438	8.00	.531	7.38
16X 6X .438/.719T	38.45	74.7	82.2	666.5	6.7	8.9	8.1	11.31	16.72	.438	6.00	.719	7.46
16X 7X .438/.656T	39.41	75.1	86.0	680.7	6.8	9.1	7.9	11.59	16.66	.438	7.00	.656	7.43
16X 8X .438/.594T	39.95	75.3	88.4	687.1	6.8	9.1	7.8	11.75	16.59	.438	8.00	.594	7.40
16X 9X .438/.531T	40.05	75.2	89.0	686.5	6.7	9.1	7.7	11.78	16.53	.438	9.00	.531	7.38
16X 7X .438/.719T	40.90	76.2	91.4	707.7	6.8	9.3	7.7	12.03	16.72	.438	7.00	.719	7.46
16X 8X .438/.656T	41.65	76.4	93.6	716.8	6.8	9.4	7.6	12.25	16.66	.438	8.00	.656	7.43
18X 5X .500/.656T	41.75	86.5	93.6	806.9	7.2	9.3	9.6	12.28	18.66	.500	5.00	.656	9.49
16X 9X .438/.594T	41.96	76.4	96.0	719.1	6.8	9.4	7.5	12.34	16.59	.438	9.00	.594	7.40
16X 5X .500/.875T	42.09	78.0	84.4	697.0	6.7	8.9	8.3	12.38	16.88	.500	5.00	.875	8.60
18X 6X .500/.594T	42.70	87.4	98.1	823.2	7.2	9.5	9.4	12.56	18.59	.500	6.00	.594	9.45
18X 5X .500/.719T	42.81	87.8	87.8	835.6	7.2	9.5	9.5	12.59	18.72	.500	5.00	.719	9.52
14X10X .438/.656T	43.15	66.3	95.4	585.8	6.0	8.8	6.1	12.69	14.66	.438	10.00	.656	6.56
16X 8X .438/.719T	43.35	77.4	100.5	744.9	6.8	9.6	7.4	12.75	16.72	.438	8.00	.719	7.46
16X 9X .438/.656T	43.89	77.5	102.8	749.9	6.8	9.7	7.3	12.91	16.66	.438	9.00	.656	7.43
18X 6X .500/.656T	44.00	88.8	93.0	861.8	7.3	9.7	9.3	12.94	18.66	.500	6.00	.656	9.49
16X10X .438/.594T	44.00	77.4	103.7	749.1	6.8	9.7	7.2	12.94	16.59	.438	10.00	.594	7.40
14X11X .438/.656T	45.36	67.0	102.6	666.8	6.0	9.1	5.9	13.34	14.66	.438	11.00	.656	6.56
16X 9X .438/.719T	45.60	78.5	109.7	779.6	6.8	9.9	7.1	13.47	16.72	.438	9.00	.719	7.46
16X10X .438/.656T	46.10	78.5	111.1	780.6	6.8	9.9	7.0	13.56	16.66	.438	10.00	.656	7.43
18X 7X .500/.719T	47.70	92.1	108.1	946.5	7.4	10.3	8.8	14.03	18.72	.500	7.00	.719	9.52
18X 6X .500/.875T	48.45	93.1	110.2	968.1	7.4	10.4	8.8	14.25	18.88	.500	6.00	.875	9.60
18X 8X .500/.719T	50.15	93.8	118.1	995.1	7.4	10.6	8.4	14.75	18.72	.500	8.00	.719	9.52
18X 9X .500/.656T	50.69	93.9	120.7	1002.4	7.4	10.7	8.3	14.91	18.66	.500	9.00	.656	9.49
18X10X .500/.594T	50.80	93.0	121.7	1001.4	7.4	10.7	8.2	14.94	18.59	.500	10.00	.594	9.45
18X 7X .500/.875T	51.44	95.1	122.3	1026.5	7.5	10.8	8.4	15.13	18.88	.500	7.00	.875	9.60
18X 9X .500/.719T	52.60	95.3	128.1	1039.7	7.4	10.9	8.1	15.47	18.72	.500	9.00	.719	9.52
18X10X .500/.656T	52.90	95.2	129.8	1042.1	7.4	10.9	8.0	15.56	18.66	.500	10.00	.656	9.49
18X 8X .500/.875T	54.40	96.7	134.4	1079.5	7.5	11.2	8.0	16.00	18.88	.500	8.00	.875	9.60
18X11X .500/.656T	55.15	96.4	139.0	1079.8	7.4	11.2	7.8	16.22	18.66	.500	11.00	.656	9.49
18X11X .500/.719T	57.49	97.7	148.2	1120.6	7.4	11.5	7.6	16.91	18.72	.500	11.00	.719	9.52

0.3125 - 5/16 in.

0.3125 IN. PLATE (AREA= 3.32 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL					DEPTH	THICK	
10X12X .500/.719F	59.94	98.7	158.0	7.4	11.7	7.3	17.63	18.72	.500	9.52
10X10X .500/.875F	60.35	99.4	158.2	7.5	11.8	7.4	17.75	18.88	.500	9.60
21X 8X .625/.875F	68.44	129.3	168.8	8.3	12.6	9.6	20.13	21.08	.625	13.87
21X10X .625/.750F	70.14	130.1	177.7	8.3	12.7	9.3	20.63	21.75	.625	13.79
21X 9X .625/.875F	71.40	131.5	182.5	8.4	12.9	9.3	21.00	21.88	.625	13.87
21X11X .625/.750F	72.69	131.9	189.7	8.3	13.0	9.0	21.38	21.75	.625	13.79
21X10X .625/.875F	74.39	133.4	196.3	8.4	13.2	9.0	21.88	21.88	.625	13.87
21X 9X .625/1.125F	79.05	137.2	214.9	8.4	13.7	8.7	23.25	22.13	.625	14.03
21X12X .625/.875F	80.34	136.7	223.2	8.4	13.8	8.4	23.63	21.88	.625	13.87
24X 9X .688/.875F	82.09	165.5	220.6	9.3	14.4	10.8	24.38	24.88	.688	17.33
21X13X .625/.875F	83.30	138.2	236.8	8.3	14.0	8.2	24.50	21.88	.625	13.87
24X10X .688/.875F	85.85	168.1	235.9	9.3	14.7	10.5	25.25	24.88	.688	17.33
21X14X .625/.875F	86.29	139.4	250.1	8.3	14.2	7.9	25.38	21.88	.625	13.87
24X 8X .688/1.125F	86.70	169.9	237.5	9.4	14.8	10.6	25.50	25.13	.688	17.50
24X11X .688/.875F	88.84	170.5	251.1	9.3	15.0	10.2	26.13	24.88	.688	17.33
24X 9X .688/1.125F	90.54	172.9	257.2	9.4	15.2	10.2	26.63	25.13	.688	17.50
24X12X .688/.875F	91.80	172.6	266.6	9.3	15.3	9.9	27.00	24.88	.688	17.33
24X13X .688/.875F	94.79	174.6	281.9	9.3	15.6	9.6	27.88	24.88	.688	17.33
24X11X .688/1.125F	98.19	177.9	295.6	9.4	15.9	9.6	28.88	25.13	.688	17.50
27X 8X .750/1.125F	99.45	210.2	282.5	10.3	16.3	12.1	29.25	28.13	.750	21.33
27X11X .750/.875F	101.59	211.2	297.5	10.2	16.5	11.7	29.88	27.88	.750	21.14
27X12X .750/.875F	103.29	214.1	304.2	10.3	16.8	11.4	30.75	27.88	.750	21.14
27X10X .750/1.125F	107.10	217.5	325.6	10.3	17.1	11.4	31.50	28.13	.750	21.33
27X11X .750/1.125F	110.94	220.6	347.1	10.2	17.4	11.1	32.63	28.13	.750	21.33
27X 9X .875/1.375F	122.40	240.3	355.9	10.2	17.1	11.6	36.00	28.38	.875	25.11
30X10X .875/1.375F	136.00	286.8	436.6	11.3	19.1	12.6	40.00	31.38	.875	27.73
30X13X .875/1.125F	138.99	287.9	459.2	11.3	19.5	12.2	41.38	31.38	.875	27.51
30X11X .875/1.375F	140.69	291.1	465.0	11.3	19.5	12.2	41.38	31.38	.875	27.73
30X14X .875/1.125F	142.80	291.2	482.8	11.2	19.6	11.8	42.00	31.13	.875	27.51
30X14X .875/1.375F	154.70	301.7	550.2	11.2	20.5	11.2	45.50	31.38	.875	27.73
33X10X1.000/1.500F	163.20	364.6	539.7	12.1	20.8	14.0	48.00	34.50	1.000	34.81
33X11X1.000/1.375F	163.64	364.2	544.6	12.1	20.8	13.9	48.13	34.38	1.000	34.69
36X13X1.000/1.125F	172.14	413.8	604.3	13.1	22.2	15.2	50.63	37.13	1.000	37.44
33X13X1.000/1.375F	172.99	374.1	606.8	12.2	21.5	13.2	50.88	34.38	1.000	34.69
36X11X1.000/1.375F	173.84	417.8	611.9	13.1	22.4	15.3	51.13	37.38	1.000	37.69
36X10X1.000/1.750F	181.90	430.9	662.5	13.2	23.1	15.0	53.50	37.75	1.000	38.06
33X16X1.000/1.375F	187.00	386.2	699.5	12.2	22.4	12.3	55.00	34.38	1.000	34.69

0.3125 - 5/16 in.



344 IN. PLATE (AREA= 4.02 SQ. IN.)

***** BEAM DIMENSIONS *****									
NOMINAL SIZE	WT/FT	SECTION MODULUS	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH
3X 2X .125/ .100T	2.55	8.4	1.0	.6	3.0	.75	3.19	.125	2.00
4X 2X .125/ .100T	2.99	11.7	1.3	.7	3.8	.88	4.19	.125	2.00
3X 3X .125/ .100T	3.20	9.3	1.1	.7	2.9	.94	3.19	.125	3.00
4X 3X .125/ .100T	3.60	12.7	1.5	.9	3.7	1.06	4.19	.125	3.00
4X 2X .100/ .080T	4.69	13.1	1.5	1.0	3.7	1.38	4.31	.100	2.00
5X 2X .100/ .080T	4.90	16.0	1.8	1.1	4.5	1.44	5.25	.100	2.00
3X 3X .100/ .080T	5.10	10.4	1.3	.9	2.7	1.50	3.31	.100	3.00
5X 2X .100/ .080T	5.30	16.7	1.9	1.2	4.4	1.56	5.31	.100	2.00
6X 2X .100/ .080T	5.95	20.3	2.3	1.5	5.2	1.75	6.31	.100	2.00
6X 3X .100/ .080T	6.39	20.8	2.4	1.6	5.0	1.88	6.25	.100	3.00
5X 4X .100/ .080T	6.60	17.9	2.1	1.5	4.1	1.94	5.25	.100	4.00
4X 4X .100/ .080T	6.80	14.8	1.6	1.3	3.3	2.00	4.31	.100	4.00
6X 3X .100/ .080T	7.00	21.6	2.5	1.7	4.9	2.06	6.31	.100	3.00
6X 4X .100/ .080T	7.24	21.7	2.5	1.8	4.8	2.13	6.25	.100	4.00
5X 4X .100/ .080T	7.45	18.6	2.2	1.7	4.0	2.19	5.31	.100	4.00
6X 4X .100/ .080T	8.09	22.5	2.6	2.0	4.7	2.38	6.31	.100	4.00
5X 5X .100/ .080T	8.50	19.1	2.3	1.8	3.8	2.50	5.31	.100	5.00
7X 3X .250/ .080T	9.15	25.4	2.9	2.2	5.5	2.69	7.31	.250	3.00
6X 3X .250/ .080T	9.55	22.9	2.6	2.1	4.7	2.81	6.44	.250	3.00
7X 3X .250/ .080T	9.79	26.2	3.0	2.3	5.4	2.88	7.38	.250	3.00
8X 3X .250/ .080T	10.00	29.3	3.2	2.5	6.2	2.94	8.31	.250	3.00
7X 4X .250/ .080T	10.20	26.4	3.0	2.4	5.3	3.00	7.31	.250	4.00
7X 3X .250/ .080T	10.40	26.8	3.0	2.4	5.3	3.06	7.44	.250	3.00
8X 3X .250/ .080T	10.64	30.1	3.3	2.7	6.1	3.13	8.38	.250	3.00
9X 3X .250/ .080T	10.85	33.2	3.6	2.8	6.8	3.19	9.31	.250	3.00
8X 4X .250/ .080T	11.05	30.5	3.4	2.8	5.9	3.25	8.31	.250	4.00
7X 5X .250/ .080T	11.25	27.2	3.1	2.6	5.0	3.31	7.31	.250	5.00
8X 3X .250/ .080T	11.49	34.1	3.4	2.8	6.0	3.31	8.44	.250	3.00
9X 3X .250/ .080T	11.90	34.5	3.8	3.1	6.5	3.50	9.31	.250	3.00
9X 4X .250/ .080T	12.10	35.0	3.8	3.2	6.6	3.56	9.44	.250	4.00
8X 5X .250/ .080T	12.10	31.3	3.5	3.0	5.7	3.56	8.31	.250	5.00
9X 4X .250/ .080T	12.75	35.5	3.9	3.3	6.4	3.75	9.38	.250	4.00
9X 5X .250/ .080T	12.95	35.5	3.9	3.4	6.3	3.81	9.31	.250	5.00
8X 5X .250/ .080T	13.19	32.2	3.6	3.2	5.5	3.81	8.38	.250	5.00
7X 5X .250/ .080T	13.40	28.6	3.3	3.0	4.8	3.94	7.44	.250	5.00
9X 4X .250/ .080T	13.60	36.3	4.0	3.5	6.3	4.00	9.44	.250	4.00
9X 5X .250/ .080T	14.04	36.5	4.0	3.6	6.1	4.13	9.38	.250	5.00
8X 5X .250/ .080T	14.25	32.9	3.7	3.4	5.4	4.19	8.44	.250	5.00
8X 6X .250/ .080T	14.45	32.9	3.7	3.5	5.3	4.25	8.38	.250	6.00
7X 6X .250/ .080T	14.89	29.2	3.4	3.2	4.5	4.38	7.44	.250	6.00
9X 5X .250/ .080T	15.10	37.3	4.1	3.8	5.9	4.44	9.44	.250	5.00
9X 6X .250/ .080T	15.30	37.2	4.1	3.9	5.8	4.50	9.38	.250	6.00
10X 4X .313/ .080T	15.74	40.2	4.2	3.8	6.9	4.63	10.38	.313	4.00
8X 6X .250/ .080T	15.74	33.5	3.8	3.7	5.1	4.63	8.44	.250	6.00
***** SHEAR AREA *****									
3X 2X .125/ .100T						.75			.44
4X 2X .125/ .100T						.88			.57
3X 3X .125/ .100T						.94			.44
4X 3X .125/ .100T						1.06			.57
4X 2X .100/ .080T						1.38			.87
5X 2X .100/ .080T						1.44			1.05
3X 3X .100/ .080T						1.50			.69
5X 2X .100/ .080T						1.56			1.06
6X 2X .100/ .080T						1.75			1.25
6X 3X .100/ .080T						1.88			1.24
5X 4X .100/ .080T						1.94			1.05
4X 4X .100/ .080T						2.00			.87
6X 3X .100/ .080T						2.06			1.25
6X 4X .100/ .080T						2.13			1.24
5X 4X .100/ .080T						2.19			1.06
6X 4X .100/ .080T						2.38			1.25
5X 5X .100/ .080T						2.50			1.06
7X 3X .250/ .080T						2.69			1.91
6X 3X .250/ .080T						2.81			1.70
7X 3X .250/ .080T						2.88			1.93
8X 3X .250/ .080T						2.94			2.16
7X 4X .250/ .080T						3.00			1.91
7X 3X .250/ .080T						3.06			1.95
8X 3X .250/ .080T						3.13			2.10
9X 3X .250/ .080T						3.19			2.41
8X 4X .250/ .080T						3.25			2.16
7X 5X .250/ .080T						3.31			1.91
8X 3X .250/ .080T						3.31			2.20
9X 3X .250/ .080T						3.38			2.43
9X 4X .250/ .080T						3.50			2.41
9X 5X .250/ .080T						3.56			2.45
8X 5X .250/ .080T						3.56			2.16
9X 4X .250/ .080T						3.75			2.43
9X 5X .250/ .080T						3.81			2.41
8X 5X .250/ .080T						3.81			2.10
7X 5X .250/ .080T						3.94			1.95
9X 4X .250/ .080T						4.00			2.45
9X 5X .250/ .080T						4.13			2.43
8X 5X .250/ .080T						4.19			2.20
8X 6X .250/ .080T						4.25			2.10
7X 6X .250/ .080T						4.38			1.95
9X 5X .250/ .080T						4.44			2.45
9X 6X .250/ .080T						4.50			2.43
10X 4X .313/ .080T						4.63			3.36
8X 6X .250/ .080T						4.63			2.20

0.3438 - 11/32 in.

0.3438 - 11/32 in.



0.344 IN. PLATE (AREA= 4.02 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			DIMENSIONS			FLANGE			SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
12X 8K .375/.656T	33.15	59.3	68.2	5.5	7.0	6.0	9.75	12.66	.375	8.00	.656	.656	4.88
14X 7K .438/.531T	33.46	69.7	65.7	6.0	7.2	7.7	9.84	14.53	.438	7.00	.531	.531	6.51
16X 5K .438/.594T	33.90	79.6	67.3	6.6	7.8	9.2	9.97	16.59	.438	5.00	.594	.594	7.42
14X 6K .438/.656T	34.20	70.6	67.7	6.1	7.3	7.7	10.06	14.66	.438	6.00	.656	.656	6.57
16X 6K .438/.531T	34.65	80.2	70.5	6.7	7.9	9.0	10.13	16.53	.438	6.00	.531	.531	7.39
16X 5K .438/.656T	34.95	80.8	71.1	6.7	8.0	9.0	10.28	16.66	.438	5.00	.656	.656	7.45
14X 7K .438/.594T	34.95	70.9	70.5	6.1	7.4	7.5	10.28	14.59	.438	7.00	.594	.594	6.54
16X 8K .438/.531T	35.29	70.9	71.9	6.1	7.5	7.4	10.38	14.53	.438	8.00	.531	.531	6.51
16X 6K .438/.594T	35.90	81.6	75.2	6.7	8.1	8.8	10.56	16.59	.438	6.00	.594	.594	7.42
16X 5K .438/.719T	36.01	82.0	75.1	6.8	8.2	8.9	10.59	16.72	.438	5.00	.719	.719	7.47
16X 7K .438/.531T	36.45	81.9	77.5	6.8	8.2	8.7	10.72	16.53	.438	7.00	.531	.531	7.39
14X 8K .438/.594T	36.99	72.1	77.5	6.1	7.7	7.2	10.88	14.59	.438	8.00	.594	.594	6.54
14X 9K .438/.531T	37.09	72.0	78.2	6.1	7.7	7.1	10.91	14.53	.438	9.00	.531	.531	6.51
16X 7K .438/.594T	37.94	83.3	83.0	6.8	8.5	8.5	11.16	16.59	.438	7.00	.594	.594	7.42
16X 8K .438/.531T	38.25	83.3	84.4	6.8	8.5	8.4	11.25	16.53	.438	8.00	.531	.531	7.39
16X 6K .438/.719T	38.45	84.0	84.5	6.8	8.6	8.5	11.31	16.72	.438	6.00	.719	.719	7.47
16X 7K .438/.656T	39.41	84.5	88.4	6.9	8.7	8.3	11.59	16.66	.438	7.00	.656	.656	7.45
16X 8K .438/.594T	39.95	84.7	90.7	6.9	8.8	8.2	11.75	16.59	.438	8.00	.594	.594	7.42
16X 9K .438/.531T	40.05	84.6	91.4	6.9	8.8	8.1	11.78	16.53	.438	9.00	.531	.531	7.39
16X 7K .438/.719T	40.90	85.7	93.9	6.9	8.9	8.1	12.03	16.72	.438	7.00	.719	.719	7.47
16X 8K .438/.656T	41.65	86.0	97.0	6.9	9.0	8.0	12.25	16.66	.438	8.00	.656	.656	7.45
18X 5K .500/.656T	41.75	96.5	86.0	7.3	9.0	10.0	12.28	18.66	.500	5.00	.656	.656	9.50
16X 9K .438/.594T	41.96	86.0	98.6	6.9	9.0	7.9	12.34	16.59	.438	9.00	.594	.594	7.42
16X 5K .500/.875T	42.09	87.3	86.8	6.8	8.6	8.6	12.38	16.88	.500	5.00	.875	.875	8.61
18X 6K .500/.594T	42.70	97.4	90.5	7.3	9.1	9.8	12.56	18.59	.500	6.00	.594	.594	9.47
18X 5K .500/.719T	42.81	97.9	90.3	7.3	9.1	9.9	12.59	18.72	.500	5.00	.719	.719	9.53
14X 10K .438/.656T	43.15	75.0	37.9	6.2	8.5	6.5	12.69	14.66	.438	10.00	.656	.656	6.57
16X 8K .438/.719T	43.35	87.1	103.2	6.9	9.3	7.8	12.75	16.72	.438	8.00	.719	.719	7.47
16X 9K .438/.656T	43.89	87.2	105.5	6.9	9.3	7.7	12.91	16.66	.438	9.00	.656	.656	7.45
18X 6K .500/.656T	44.00	99.0	95.6	7.4	9.3	9.7	12.94	18.66	.500	6.00	.656	.656	9.50
16X 10K .438/.594T	44.00	87.1	106.4	6.9	9.3	7.6	12.94	16.59	.438	10.00	.594	.594	7.42
14X 11K .438/.656T	45.36	75.7	105.3	6.2	8.7	6.3	13.34	14.66	.438	11.00	.656	.656	6.57
16X 9K .438/.719T	45.00	88.3	112.6	6.9	9.6	7.5	13.47	16.72	.438	9.00	.719	.719	7.47
16X 10K .438/.656T	46.10	88.3	114.0	6.9	9.6	7.4	13.56	16.66	.438	10.00	.656	.656	7.45
18X 7K .500/.719T	47.70	102.5	111.1	7.5	9.9	9.2	14.03	18.72	.500	7.00	.719	.719	9.53
18X 6K .500/.875T	48.45	103.6	113.3	7.5	10.0	9.2	14.25	18.88	.500	6.00	.875	.875	9.61
18X 8K .500/.719T	50.15	104.4	121.4	7.5	10.2	8.8	14.75	18.72	.500	8.00	.719	.719	9.53
18X 9K .500/.656T	50.69	104.6	124.0	7.5	10.3	8.7	14.91	18.66	.500	9.00	.656	.656	9.50
18X 10K .500/.594T	50.80	104.4	125.8	7.5	10.3	8.6	14.94	18.59	.500	10.00	.594	.594	9.47
18X 7K .500/.875T	51.44	105.8	125.6	7.6	10.4	8.8	15.13	18.88	.500	7.00	.875	.875	9.61
18X 9K .500/.719T	52.68	106.8	131.5	7.6	10.6	8.5	15.47	18.72	.500	9.00	.719	.719	9.53
18X 10K .500/.656T	52.90	106.0	133.2	7.6	10.6	8.4	15.56	18.66	.500	10.00	.656	.656	9.50
18X 8K .500/.875T	54.40	107.6	138.1	7.6	10.8	8.2	16.00	18.88	.500	8.00	.875	.875	9.61
18X 11K .500/.656T	55.15	107.2	142.7	7.6	10.8	8.2	16.22	18.66	.500	11.00	.656	.656	9.50
18X 11K .500/.719T	57.49	108.7	142.7	7.6	11.1	7.9	16.91	18.72	.500	11.00	.719	.719	9.53

0.3438 - 11/32 in.

0.344 IN. PLATE (AREA= 4.02 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YF	YF	AREA	DEPTH	WEB THICK	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL								WIDTH	FLANGE THICK	
18X12X .500/ .719T	59.94	109.8	162.3	1248.2	7.6	11.4	7.7	17.63	18.72	.500	12.00	.719	9.53
18X10X .500/ .875T	68.35	110.5	162.5	1264.8	7.6	11.4	7.0	17.75	18.88	.500	10.00	.875	9.61
21X 8X .625/ .875T	68.44	141.4	173.3	1730.5	8.5	12.2	10.0	20.13	21.00	.625	8.00	.875	12.89
21X10X .625/ .750T	70.14	142.3	192.4	1766.3	8.5	12.4	9.7	20.63	21.75	.625	19.00	.750	13.81
21X 9X .625/ .875T	71.40	143.8	187.3	1807.7	8.5	12.6	9.7	21.00	21.88	.625	9.00	.875	13.89
21X11X .625/ .750T	72.69	144.2	194.6	1830.0	8.5	12.7	9.4	21.38	21.75	.625	11.00	.750	13.81
21X10X .625/ .875T	74.39	145.9	201.4	1860.2	8.5	12.9	9.3	21.88	21.88	.625	10.00	.875	13.89
21X 9X .625/1.125T	79.05	149.9	228.5	2005.3	8.6	13.4	9.1	23.25	22.13	.625	9.00	1.125	14.05
21X12X .625/ .875T	80.34	149.4	228.9	2009.4	8.5	13.4	8.8	23.63	21.88	.625	12.00	.875	13.89
24X 9X .688/ .875T	82.83	179.2	226.1	2521.7	9.4	14.1	11.2	24.38	24.88	.688	9.00	.875	17.35
21X13X .625/ .875T	83.30	151.0	242.8	2068.0	8.5	13.7	8.5	24.50	21.88	.625	13.00	.875	13.89
24X10X .688/ .875T	85.85	182.0	241.8	2618.9	9.5	14.4	10.8	25.25	24.88	.688	10.00	.875	17.35
21X14X .625/ .875T	86.29	152.3	256.5	2124.0	8.5	13.9	8.3	25.38	21.88	.625	14.00	.875	13.89
24X 8X .688/1.125T	86.70	183.9	243.5	2668.9	9.5	14.5	11.0	25.50	25.13	.688	8.00	1.125	17.53
24X11X .688/ .875T	88.84	184.5	257.3	2710.5	9.5	14.7	10.5	26.13	24.88	.688	11.00	.875	17.35
24X 9X .688/1.125T	90.54	187.0	263.6	2786.0	9.5	14.9	10.6	26.63	25.13	.688	9.00	1.125	17.53
24X12X .688/ .875T	91.80	186.8	273.1	2797.7	9.5	15.0	10.2	27.00	24.88	.688	12.00	.875	17.35
24X13X .688/ .875T	94.79	188.8	288.7	2879.7	9.5	15.3	10.8	27.88	24.88	.688	13.00	.875	17.35
24X11X .688/1.125T	98.19	192.3	302.8	2996.2	9.5	15.6	9.9	28.88	25.13	.688	11.00	1.125	17.53
27X 8X .750/1.125T	99.45	225.5	289.3	3608.4	10.4	16.0	12.5	29.25	28.13	.750	8.00	1.125	21.36
27X11X .750/ .875T	101.59	226.6	304.5	3666.6	10.4	16.2	12.0	29.88	27.88	.750	11.00	.875	21.17
27X 9X .750/1.125T	103.29	229.6	311.4	3762.8	10.5	16.4	12.1	30.38	28.13	.750	9.00	1.125	21.36
27X12X .750/ .875T	104.55	229.6	321.8	3781.6	10.4	16.5	11.8	30.75	27.88	.750	12.00	.875	21.17
27X10X .750/1.125T	107.10	233.3	333.2	3906.9	10.5	16.7	11.7	31.50	28.13	.750	10.00	1.125	21.36
27X11X .750/1.125T	110.94	236.5	355.1	4042.4	10.5	17.1	11.4	32.63	28.13	.750	11.00	1.125	21.36
27X 9X .875/1.375T	122.40	256.0	363.0	4316.1	10.4	16.9	11.9	36.00	28.38	.875	9.00	1.375	25.13
30X10X .875/1.375T	136.00	304.2	445.8	5735.6	11.4	18.9	12.9	40.00	31.38	.875	10.00	1.375	27.76
30X13X .875/1.125T	138.99	305.4	468.7	5819.3	11.4	19.1	12.4	40.88	31.13	.875	13.00	1.125	27.54
30X11X .875/1.375T	140.69	308.6	474.6	5933.1	11.4	19.2	12.5	41.38	31.38	.875	11.00	1.375	27.76
30X14X .875/1.125T	142.80	308.7	492.7	5973.9	11.4	19.3	12.1	42.00	31.13	.875	14.00	1.125	27.54
30X11X .875/1.375T	154.70	319.7	561.9	6461.7	11.4	20.2	11.5	45.50	31.38	.875	14.00	1.375	27.76
33X10X1.000/1.500T	163.20	383.4	549.9	7871.2	12.3	20.5	14.3	48.00	34.50	1.000	10.00	1.500	34.84
33X11X1.000/1.375T	163.64	383.0	554.8	7866.0	12.3	20.5	14.2	48.13	34.38	1.000	11.00	1.375	34.72
35X13X1.000/1.125T	172.14	433.9	615.1	9534.6	13.2	22.0	15.5	50.63	37.13	1.000	13.00	1.125	37.47
33X14X1.000/1.375T	172.99	393.2	618.0	8344.0	12.3	21.2	13.5	50.88	34.38	1.000	13.00	1.375	34.72
35X11X1.000/1.375T	173.84	438.1	622.9	9702.9	13.3	22.1	15.6	51.13	37.38	1.000	11.00	1.375	37.72
36X10X1.000/1.750T	181.90	451.6	674.2	10302.6	13.4	22.0	15.3	53.50	37.75	1.000	10.00	1.750	38.09
33X16X1.000/1.375T	187.00	405.7	712.1	8975.8	12.3	22.1	12.6	55.00	34.38	1.000	16.00	1.375	34.72

0.3438 - 11/32 in.



SECTION MODULUS			BEAM DIMENSIONS			FLANGE			SHEAR AREA				
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X .125/ .100T	9.3	1.6	4.9	.9	.5	3.0	.75	3.19	.125	2.00	.188	.45	1.88
4X 2X .125/ .100T	2.99	13.1	6.7	1.2	.7	2.9	.88	4.19	.125	2.00	.188	.57	2.00
3X 3X .125/ .100T	3.20	10.4	6.5	1.1	.6	2.9	.94	3.19	.125	3.00	.188	.45	2.00
4X 3X .125/ .100T	3.60	14.4	11.3	1.4	.8	3.8	1.06	4.19	.125	3.00	.188	.57	2.00
4X 2X .100/ .313T	4.69	14.9	13.4	1.5	.9	3.8	1.38	4.31	.188	2.00	.313	.88	2.00
5X 2X .100/ .250T	4.90	18.2	18.6	1.7	1.0	4.6	1.44	5.25	.188	2.00	.250	1.06	2.00
3X 3X .100/ .313T	5.10	11.9	10.0	1.3	.8	2.8	1.50	3.31	.188	3.00	.313	.69	2.00
5X 2X .100/ .313T	5.30	19.1	21.2	1.8	1.1	4.6	1.56	5.31	.188	2.00	.313	1.07	2.00
6X 2X .100/ .313T	5.95	23.3	31.3	2.2	1.3	5.3	1.75	6.31	.188	2.00	.313	1.26	2.00
6X 3X .100/ .250T	6.39	23.9	34.4	2.3	1.4	5.2	1.88	6.25	.188	3.00	.250	1.26	2.00
5X 4X .100/ .250T	6.60	20.6	27.9	2.0	1.4	4.3	1.94	5.25	.188	4.00	.250	1.06	2.00
4X 4X .100/ .313T	6.80	17.0	30.9	1.8	1.2	3.5	2.00	4.31	.188	4.00	.313	.88	2.00
6X 3X .100/ .313T	7.00	24.9	39.3	2.4	1.6	5.1	2.06	6.31	.188	3.00	.313	1.26	2.00
6X 4X .100/ .250T	7.24	25.0	40.6	2.4	1.6	5.0	2.13	6.25	.188	4.00	.250	1.25	2.00
5X 4X .100/ .313T	7.45	21.4	32.3	2.2	1.5	4.2	2.19	5.31	.188	4.00	.313	1.07	2.00
6X 4X .100/ .313T	8.09	26.0	46.7	2.6	1.8	4.9	2.38	6.31	.188	4.00	.313	1.26	2.00
5X 5X .100/ .313T	8.50	22.1	37.2	2.3	1.7	4.0	2.50	5.31	.188	5.00	.313	1.07	2.00
7X 3X .250/ .313T	9.15	29.3	57.0	2.8	2.0	5.7	2.69	7.31	.250	3.00	.313	1.92	2.00
6X 3X .250/ .438T	9.55	26.4	50.7	2.6	1.9	4.9	2.81	6.44	.250	3.00	.438	1.70	2.00
7X 3X .250/ .375T	9.79	30.2	63.8	2.9	2.1	5.6	2.88	7.38	.250	3.00	.375	1.94	2.00
8X 3X .250/ .313T	10.00	33.7	77.2	3.2	2.3	6.4	2.94	8.31	.250	3.00	.313	2.17	2.00
7X 4X .250/ .313T	10.20	30.5	66.9	2.9	2.2	5.5	3.00	7.31	.250	4.00	.313	1.92	2.00
10.40	30.9	12.5	69.5	3.0	2.2	5.6	3.06	7.44	.250	3.00	.438	1.95	2.00
10.64	34.7	13.4	84.8	3.3	2.4	6.3	3.13	8.38	.250	3.00	.375	2.19	2.00
10.85	38.2	14.1	99.8	3.5	2.6	7.1	3.19	9.31	.250	3.00	.313	2.42	2.00
11.05	35.1	14.4	88.9	3.3	2.5	6.2	3.25	8.31	.250	4.00	.313	2.17	2.00
11.25	31.4	14.3	75.4	3.1	2.4	5.3	3.31	7.31	.250	5.00	.313	1.92	2.00
11.25	35.6	14.8	92.0	3.4	2.6	6.2	3.31	8.44	.250	3.00	.438	2.20	2.00
11.43	39.3	15.6	109.0	3.7	2.8	7.0	3.38	9.38	.250	3.00	.375	2.44	2.00
11.90	39.7	16.7	114.1	3.									

0.3750 - 3/8 in.

.375 IN. PLATE (AREA= 4.78 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM		FLANGE		SHEAR	
7X 7X .250/ .438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
10X 4X .313/ .438T	16.35	34.3	24.1	110.6	3.4	3.2	4.6	4.81	7.44	.250	7.00	.438	1.95
10X 4X .313/ .438T	16.59	47.2	25.1	176.9	4.3	3.8	7.1	4.88	10.44	.313	4.00	.438	3.39
10X 6X .250/ .438T	16.59	43.9	28.2	168.4	4.2	3.8	6.0	4.88	9.44	.250	6.00	.438	2.45
10X 5X .313/ .375T	17.00	47.5	26.3	182.2	4.3	3.8	6.9	5.00	10.38	.313	5.00	.375	3.37
8X 7X .250/ .438T	17.20	39.4	27.9	143.8	3.8	3.7	5.2	5.06	8.44	.250	7.00	.438	2.20
10X 4X .313/ .500T	17.44	48.1	27.3	189.4	4.4	3.9	6.9	5.13	10.50	.313	4.00	.500	3.40
9X 7X .250/ .438T	18.05	44.6	31.8	182.2	4.2	4.1	5.7	5.31	9.44	.250	7.00	.438	2.45
10X 6X .313/ .375T	18.29	48.6	29.7	198.4	4.4	4.1	6.7	5.38	10.38	.313	6.00	.375	3.37
10X 5X .313/ .500T	19.14	49.5	31.8	210.6	4.5	4.3	6.6	5.63	10.50	.313	5.00	.500	3.40
10X 6X .313/ .438T	19.55	49.6	33.0	214.5	4.5	4.3	6.5	5.75	10.44	.313	6.00	.438	3.39
10X 5X .313/ .563T	20.20	50.4	34.5	224.0	4.6	4.4	6.5	5.94	10.56	.313	5.00	.563	3.42
10X 6X .313/ .500T	20.84	50.6	36.3	230.0	4.6	4.5	6.3	6.13	10.50	.313	6.00	.500	3.40
10X 7X .313/ .438T	21.05	50.6	37.0	231.0	4.6	4.6	6.2	6.19	10.44	.313	7.00	.438	3.39
9X 7X .313/ .500T	21.45	46.0	36.2	199.9	4.2	4.4	5.5	6.31	9.50	.313	7.00	.500	3.09
12X 4X .375/ .469T	21.69	59.0	34.8	281.2	5.0	4.8	8.1	6.38	12.47	.375	4.00	.469	4.82
10X 6X .313/ .563T	22.10	51.4	39.6	244.6	4.7	4.8	6.2	6.58	10.56	.313	6.00	.563	3.42
10X 7X .313/ .500T	22.54	51.5	40.8	247.6	4.7	4.8	6.1	6.53	10.50	.313	7.00	.500	3.40
12X 4X .375/ .531T	22.54	60.1	37.4	297.4	5.1	5.0	8.0	6.63	12.53	.375	4.00	.531	4.84
9X 7X .313/ .563T	22.95	46.7	39.7	213.1	4.3	4.6	5.4	6.75	9.56	.313	7.00	.563	3.11
9X 8X .313/ .500T	23.15	46.6	40.3	213.4	4.3	4.6	5.3	6.81	9.50	.313	8.00	.500	3.89
12X 5X .375/ .469T	23.26	60.7	39.9	309.1	5.2	5.1	7.8	6.84	12.47	.375	5.00	.469	4.82
12X 4X .375/ .594T	23.39	61.1	40.0	313.3	5.2	5.1	7.8	6.88	12.59	.375	4.00	.594	4.86
10X 7X .313/ .563T	24.00	52.3	44.6	263.1	4.7	5.0	5.9	7.06	10.56	.313	7.00	.563	3.42
10X 8X .313/ .500T	24.24	52.2	45.4	264.1	4.7	5.1	5.8	7.13	10.50	.313	8.00	.500	3.40
12X 4X .375/ .656T	24.24	62.1	42.4	328.2	5.2	5.3	7.7	7.13	12.66	.375	4.00	.656	4.89
9X 8X .313/ .563T	24.85	47.3	44.8	226.9	4.3	4.8	5.1	7.31	9.56	.313	8.00	.563	3.11
12X 6X .375/ .469T	24.85	62.2	44.8	334.5	5.3	5.4	7.5	7.31	12.47	.375	6.00	.469	4.82
12X 5X .375/ .594T	25.40	62.9	46.1	345.1	5.3	5.5	7.5	7.47	12.59	.375	5.00	.594	4.86
10X 8X .313/ .563T	25.94	53.0	49.7	280.5	4.8	5.3	5.6	7.63	10.56	.313	8.00	.563	3.42
12X 5X .375/ .656T	26.45	63.9	49.2	362.5	5.4	5.7	7.4	7.78	12.66	.375	5.00	.656	4.89
12X 7X .375/ .469T	26.45	63.4	49.8	358.1	5.3	5.6	7.2	7.78	12.47	.375	7.00	.469	4.82
12X 6X .375/ .594T	27.40	64.4	52.4	374.3	5.4	5.8	7.1	8.06	12.59	.375	6.00	.594	4.86
12X 7X .375/ .531T	27.95	64.5	54.3	380.4	5.4	5.9	7.0	8.22	12.53	.375	7.00	.531	4.84
12X 6X .375/ .656T	28.70	65.3	56.0	393.1	5.5	6.0	7.0	8.44	12.66	.375	6.00	.656	4.89
12X 8X .375/ .594T	29.44	65.5	58.6	401.0	5.5	6.1	6.8	8.66	12.59	.375	7.00	.594	4.86
12X 8X .375/ .531T	29.75	65.5	59.7	403.2	5.5	6.2	6.8	8.75	12.53	.375	8.00	.531	4.84
14X 5X .438/ .531T	29.85	75.1	54.5	470.8	5.9	6.3	8.6	8.78	14.53	.438	5.00	.531	6.53
14X 5X .438/ .594T	30.91	76.4	58.0	493.5	6.0	6.5	8.5	9.09	14.59	.438	5.00	.594	6.55
12X 8X .375/ .531T	31.45	66.5	64.8	425.4	5.5	6.4	6.6	9.25	12.59	.375	8.00	.531	4.84
12X 9X .375/ .531T	31.55	66.4	65.4	425.0	5.5	6.4	6.5	9.28	12.53	.375	9.00	.531	4.84
14X 6X .438/ .531T	31.65	77.0	60.9	506.7	6.0	6.6	8.3	9.31	14.53	.438	6.00	.531	6.53
14X 5X .438/ .656T	31.99	77.6	61.6	516.2	6.0	6.7	8.4	9.41	14.66	.438	5.00	.656	6.59
16X 5X .438/ .531T	32.84	87.8	64.9	630.8	6.6	7.2	9.7	9.66	16.53	.438	5.00	.531	7.48
14X 6X .438/ .594T	32.95	78.3	65.1	531.9	6.1	6.8	8.2	9.69	14.59	.438	6.00	.594	6.55
14X 5X .438/ .719T	33.05	78.7	65.0	537.5	6.1	6.8	8.3	9.72	14.72	.438	5.00	.719	6.61

0.3750 - 3/8 in.



0.375 IN. PLATE (AREA= 4.78 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL					DEPTH	THICK	WIDTH	THICK
12X 8X .375/.6561	33.15	67.4	69.7	446.8	5.5	6.6	8.4	9.75	.375	8.00	.656
14X 7X .438/.5311	33.46	78.6	81.3	540.1	6.1	6.9	8.0	9.84	.438	7.00	.531
16X 5X .438/.5941	33.90	89.3	92.0	660.0	6.7	7.4	9.6	9.97	.438	5.00	.594
14X 6X .438/.6561	34.20	79.5	82.2	556.8	6.1	7.0	8.0	10.06	.438	6.00	.656
16X 6X .438/.5311	34.65	90.0	92.7	677.2	6.7	7.5	9.4	10.19	.438	6.00	.531
16X 5X .438/.6561	34.95	90.7	93.4	688.5	6.8	7.6	9.4	10.28	.438	5.00	.656
14X 7X .438/.5941	34.95	79.8	82.5	567.4	6.1	7.1	7.9	10.28	.438	7.00	.594
14X 8X .438/.5311	35.29	79.9	82.6	571.1	6.1	7.1	7.8	10.38	.438	8.00	.531
16X 6X .438/.5941	35.90	91.5	94.2	709.4	6.8	7.8	9.2	10.56	.438	6.00	.594
16X 5X .438/.7191	36.01	92.0	94.7	716.0	6.8	7.8	9.3	10.59	.438	5.00	.719
16X 7X .438/.5311	36.45	91.9	94.6	719.7	6.8	7.8	9.1	10.72	.438	7.00	.531
14X 8X .438/.5941	36.99	81.2	83.9	600.4	6.2	7.4	7.6	10.88	.438	8.00	.594
14X 9X .438/.5311	37.03	81.0	83.7	600.0	6.2	7.4	7.5	10.91	.438	9.00	.531
16X 7X .438/.5941	37.94	93.4	96.1	754.8	6.9	8.1	8.9	11.16	.438	7.00	.594
16X 8X .438/.5311	38.25	93.5	96.2	759.2	6.9	8.1	8.8	11.25	.438	8.00	.531
16X 6X .438/.7191	38.45	94.2	96.9	771.1	6.9	8.2	8.9	11.31	.438	6.00	.719
16X 7X .438/.6561	39.41	94.8	97.5	788.6	6.9	8.3	8.7	11.59	.438	7.00	.656
16X 8X .438/.5941	39.95	95.0	97.7	796.7	6.9	8.4	8.6	11.75	.438	8.00	.594
16X 9X .438/.5311	40.05	94.9	97.6	796.3	6.9	8.4	8.5	11.78	.438	9.00	.531
16X 7X .438/.7191	40.90	96.1	98.8	821.5	7.0	8.6	8.5	12.03	.438	7.00	.719
16X 8X .438/.6561	41.65	96.4	99.1	833.1	7.0	8.6	8.4	12.25	.438	8.00	.656
18X 5X .500/.6561	41.75	107.3	110.0	921.7	7.4	8.6	10.4	12.28	.500	5.00	.656
16X 9X .438/.5941	41.96	96.4	99.1	836.2	7.0	8.7	8.3	12.34	.438	9.00	.594
16X 5X .500/.8751	42.09	97.3	100.0	802.5	6.8	8.2	9.0	12.38	.500	5.00	.875
18X 6X .500/.5941	42.70	108.3	111.0	948.2	7.4	8.8	10.2	12.56	.500	6.00	.594
18X 5X .500/.7191	42.81	108.8	111.5	955.4	7.4	8.8	10.3	12.59	.500	5.00	.719
16X 8X .438/.6561	43.15	84.4	87.1	868.9	6.3	8.2	6.9	12.59	.438	10.00	.656
16X 9X .438/.5941	43.35	97.6	100.3	867.4	6.3	8.2	8.2	12.75	.438	8.00	.594
16X 10X .438/.5311	43.89	97.7	100.4	874.0	7.0	8.9	8.1	12.91	.438	9.00	.531
18X 6X .500/.6561	44.00	110.0	112.7	986.6	7.5	9.0	10.1	12.94	.500	6.00	.656
14X 11X .438/.6561	45.36	85.3	88.0	715.6	6.3	8.4	8.6	13.34	.438	11.00	.656
16X 9X .438/.7191	45.80	99.0	101.7	910.5	7.1	9.2	7.9	13.47	.438	9.00	.719
16X 10X .438/.6561	46.10	98.9	101.6	912.2	7.1	9.2	7.8	13.56	.438	10.00	.656
18X 7X .500/.7191	47.70	113.9	116.6	1087.4	7.6	9.5	9.5	14.03	.500	7.00	.719
18X 6X .500/.5941	48.45	115.1	117.8	1113.2	7.6	9.7	9.6	14.25	.500	6.00	.594
18X 8X .500/.7191	50.15	115.9	118.6	1145.7	7.7	9.9	9.2	14.75	.500	8.00	.719
18X 9X .500/.6561	50.69	116.1	118.8	1154.8	7.7	10.0	9.1	14.91	.500	9.00	.656
18X 10X .500/.5941	50.80	116.0	118.7	1182.8	7.7	10.1	9.2	15.13	.500	10.00	.594
18X 7X .500/.8751	51.44	117.4	120.1	1199.6	7.7	10.2	8.9	15.47	.500	7.00	.875
18X 9X .500/.7191	52.60	117.7	120.4	1202.9	7.7	10.2	8.8	15.56	.500	10.00	.719
18X 10X .500/.6561	52.90	117.7	120.4	1247.0	7.7	10.4	8.5	16.22	.500	8.00	.656
18X 8X .500/.8751	54.40	119.4	122.1	1248.8	7.7	10.5	8.5	16.22	.500	11.00	.875
18X 11X .500/.6561	55.15	119.1	121.8	1298.2	7.7	10.6	8.3	16.91	.500	11.00	.656
18X 11X .500/.7191	57.49	120.6	123.3	1298.2	7.7	10.6	8.3	16.91	.500	11.00	.719

0.3750 - 3/8 in.

• 375 IN. PLATE (AREA = 4.78 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	FLANGE THICK	
19X12X .500/.719T	59.94	121.0	166.2	1342.2	7.7	11.0	8.1	17.63	18.72	.500	12.00	.719	9.55
18X10X .500/.875T	60.35	122.6	166.5	1360.0	7.8	11.1	8.2	17.75	18.88	.500	10.00	.875	9.63
21X 8X .625/.875T	68.44	154.7	177.6	1839.9	8.6	11.9	10.4	20.13	21.88	.625	8.00	.875	13.91
21X10X .625/.750T	70.14	155.6	186.9	1878.8	8.6	12.1	10.1	20.63	21.75	.625	10.00	.750	13.83
21X 9X .625/.875T	71.40	157.2	191.9	1923.3	8.6	12.2	10.0	21.00	21.88	.625	9.00	.875	13.91
21X11X .625/.750T	72.69	157.7	199.4	1947.9	8.6	12.4	9.8	21.38	21.75	.625	11.00	.750	13.83
21X10X .625/.875T	74.39	159.5	206.3	2001.9	8.7	12.6	9.7	21.88	21.88	.625	10.00	.875	13.91
21X 9X .625/1.125T	79.05	163.7	226.0	2136.6	8.7	13.0	9.5	23.25	22.13	.625	9.00	1.125	14.07
21X12X .625/.875T	80.34	163.3	234.5	2142.1	8.7	13.1	9.1	23.63	21.88	.625	12.00	.875	13.91
24X 9X .688/.875T	82.89	194.2	231.6	2667.2	9.6	13.7	11.5	24.38	24.88	.688	9.00	.875	17.38
21X13X .625/.875T	83.30	164.9	248.7	2208.7	9.6	13.4	8.9	24.50	21.88	.625	13.00	.875	13.91
24X10X .688/.875T	85.85	197.1	247.5	2771.3	9.6	14.1	11.2	25.25	24.88	.688	10.00	.875	17.38
21X14X .625/.875T	86.29	166.4	262.6	2266.9	8.7	13.6	8.6	25.38	21.88	.625	14.00	.875	13.91
24X 8X .688/1.125T	96.70	199.1	249.4	2823.9	9.7	14.2	11.3	25.50	25.13	.688	8.00	1.125	17.55
24X11X .688/.875T	88.84	199.8	263.4	2863.4	9.6	14.4	10.9	26.13	24.88	.688	11.00	.875	17.38
24X 9X .688/1.125T	90.54	202.5	269.9	2950.3	9.7	14.6	10.9	26.63	25.13	.688	9.00	1.125	17.55
24X12X .688/.875T	91.80	202.2	279.5	2963.1	9.7	14.7	10.6	27.00	24.88	.688	12.00	.875	17.38
24X13X .688/.875T	94.79	204.4	295.4	3051.3	9.7	14.9	10.3	27.88	24.88	.688	13.00	.875	17.38
24X11X .688/1.125T	98.19	208.1	309.9	3175.3	9.7	15.3	10.2	28.88	25.13	.688	11.00	1.125	17.55
27X 8X .750/1.125T	99.45	242.3	295.9	3797.4	10.6	15.7	12.8	29.25	28.13	.750	8.00	1.125	21.38
27X11X .750/.875T	101.59	243.4	311.4	3960.1	10.6	15.9	12.4	29.88	27.88	.750	11.00	.875	21.19
27X 9X .750/1.125T	103.29	246.6	318.5	3961.4	10.6	16.1	12.4	30.38	28.13	.750	9.00	1.125	21.38
27X12X .750/.875T	104.55	246.5	329.1	3982.3	10.6	16.2	12.1	30.75	27.88	.750	12.00	.875	21.19
27X10X .750/1.125T	107.10	250.4	340.7	4114.4	10.6	16.4	12.1	31.50	28.13	.750	10.00	1.125	21.38
27X11X .750/1.125T	118.94	253.3	363.0	4258.7	10.7	16.8	11.7	32.63	28.13	.750	11.00	1.125	21.38
27X 9X .875/1.375T	122.40	273.1	371.8	4526.9	10.5	16.6	12.2	36.00	28.38	.875	9.00	1.375	25.16
30X10X .875/1.375T	136.00	323.1	455.0	6008.0	11.6	18.6	13.2	40.00	31.38	.875	10.00	1.375	27.79
30X13X .875/1.125T	138.99	324.4	478.2	6099.5	11.5	18.8	12.7	40.88	31.13	.875	13.00	1.125	27.57
30X11X .875/1.375T	140.69	327.8	484.4	6208.1	11.6	18.9	12.8	41.38	31.38	.875	11.00	1.375	27.79
30X14X .875/1.125T	142.80	327.9	502.7	6252.5	11.6	19.1	12.4	42.00	31.13	.875	14.00	1.125	27.57
30X10X .875/1.375T	154.70	339.3	572.7	6766.3	11.6	19.9	11.8	45.50	31.38	.875	14.00	1.375	27.79
33X10X1.000/1.500T	163.20	403.9	560.3	8185.6	12.5	20.3	14.6	48.00	34.50	1.000	10.00	1.500	34.68
33X11X1.000/1.375T	163.64	403.5	565.3	8182.8	12.4	20.3	14.5	48.13	34.38	1.000	11.00	1.375	34.76
36X13X1.000/1.125T	172.14	455.9	626.2	9895.4	13.4	21.7	15.8	50.63	37.13	1.000	13.00	1.125	37.51
33X13X1.000/1.375T	172.93	414.1	629.4	8680.3	12.5	21.0	13.8	50.88	34.38	1.000	13.00	1.375	34.76
36X11X1.000/1.375T	173.84	460.3	634.2	10069.3	13.4	21.9	15.9	51.13	37.38	1.000	11.00	1.375	37.76
36X10X1.000/1.750T	181.90	474.2	686.3	10691.7	13.5	22.5	15.6	53.50	37.75	1.000	10.00	1.750	38.13
33X16X1.000/1.375T	187.00	427.1	724.9	9340.9	12.5	21.9	12.9	55.00	34.38	1.000	16.00	1.375	34.76

1.3750 - 1 3/8 in.



.438 IN. PLATE (AREA= 6.51 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****				SHEAR AREA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
3X 2X	4X 2X	5X 2X	6X 2X	7X 2X	8X 2X	9X 2X	10X 2X	11X 2X	12X 2X	13X 2X	14X 2X	15X 2X	16X 2X	17X 2X	18X 2X	19X 2X	20X 2X	21X 2X	22X 2X	23X 2X	24X 2X	25X 2X	26X 2X	27X 2X	28X 2X	29X 2X	30X 2X	31X 2X	32X 2X	33X 2X	34X 2X	35X 2X	36X 2X	37X 2X	38X 2X	39X 2X	40X 2X	41X 2X	42X 2X	43X 2X	44X 2X	45X 2X	46X 2X	47X 2X	48X 2X	49X 2X	50X 2X	51X 2X	52X 2X	53X 2X	54X 2X	55X 2X	56X 2X	57X 2X	58X 2X	59X 2X	60X 2X	61X 2X	62X 2X	63X 2X	64X 2X	65X 2X	66X 2X	67X 2X	68X 2X	69X 2X	70X 2X	71X 2X	72X 2X	73X 2X	74X 2X	75X 2X	76X 2X	77X 2X	78X 2X	79X 2X	80X 2X	81X 2X	82X 2X	83X 2X	84X 2X	85X 2X	86X 2X	87X 2X	88X 2X	89X 2X	90X 2X	91X 2X	92X 2X	93X 2X	94X 2X	95X 2X	96X 2X	97X 2X	98X 2X	99X 2X	100X 2X	101X 2X	102X 2X	103X 2X	104X 2X	105X 2X	106X 2X	107X 2X	108X 2X	109X 2X	110X 2X	111X 2X	112X 2X	113X 2X	114X 2X	115X 2X	116X 2X	117X 2X	118X 2X	119X 2X	120X 2X	121X 2X	122X 2X	123X 2X	124X 2X	125X 2X	126X 2X	127X 2X	128X 2X	129X 2X	130X 2X	131X 2X	132X 2X	133X 2X	134X 2X	135X 2X	136X 2X	137X 2X	138X 2X	139X 2X	140X 2X	141X 2X	142X 2X	143X 2X	144X 2X	145X 2X	146X 2X	147X 2X	148X 2X	149X 2X	150X 2X	151X 2X	152X 2X	153X 2X	154X 2X	155X 2X	156X 2X	157X 2X	158X 2X	159X 2X	160X 2X	161X 2X	162X 2X	163X 2X	164X 2X	165X 2X	166X 2X	167X 2X	168X 2X	169X 2X	170X 2X	171X 2X	172X 2X	173X 2X	174X 2X	175X 2X	176X 2X	177X 2X	178X 2X	179X 2X	180X 2X	181X 2X	182X 2X	183X 2X	184X 2X	185X 2X	186X 2X	187X 2X	188X 2X	189X 2X	190X 2X	191X 2X	192X 2X	193X 2X	194X 2X	195X 2X	196X 2X	197X 2X	198X 2X	199X 2X	200X 2X	201X 2X	202X 2X	203X 2X	204X 2X	205X 2X	206X 2X	207X 2X	208X 2X	209X 2X	210X 2X	211X 2X	212X 2X	213X 2X	214X 2X	215X 2X	216X 2X	217X 2X	218X 2X	219X 2X	220X 2X	221X 2X	222X 2X	223X 2X	224X 2X	225X 2X	226X 2X	227X 2X	228X 2X	229X 2X	230X 2X	231X 2X	232X 2X	233X 2X	234X 2X	235X 2X	236X 2X	237X 2X	238X 2X	239X 2X	240X 2X	241X 2X	242X 2X	243X 2X	244X 2X	245X 2X	246X 2X	247X 2X	248X 2X	249X 2X	250X 2X	251X 2X	252X 2X	253X 2X	254X 2X	255X 2X	256X 2X	257X 2X	258X 2X	259X 2X	260X 2X	261X 2X	262X 2X	263X 2X	264X 2X	265X 2X	266X 2X	267X 2X	268X 2X	269X 2X	270X 2X	271X 2X	272X 2X	273X 2X	274X 2X	275X 2X	276X 2X	277X 2X	278X 2X	279X 2X	280X 2X	281X 2X	282X 2X	283X 2X	284X 2X	285X 2X	286X 2X	287X 2X	288X 2X	289X 2X	290X 2X	291X 2X	292X 2X	293X 2X	294X 2X	295X 2X	296X 2X	297X 2X	298X 2X	299X 2X	300X 2X	301X 2X	302X 2X	303X 2X	304X 2X	305X 2X	306X 2X	307X 2X	308X 2X	309X 2X	310X 2X	311X 2X	312X 2X	313X 2X	314X 2X	315X 2X	316X 2X	317X 2X	318X 2X	319X 2X	320X 2X	321X 2X	322X 2X	323X 2X	324X 2X	325X 2X	326X 2X	327X 2X	328X 2X	329X 2X	330X 2X	331X 2X	332X 2X	333X 2X	334X 2X	335X 2X	336X 2X	337X 2X	338X 2X	339X 2X	340X 2X	341X 2X	342X 2X	343X 2X	344X 2X	345X 2X	346X 2X	347X 2X	348X 2X	349X 2X	350X 2X	351X 2X	352X 2X	353X 2X	354X 2X	355X 2X	356X 2X	357X 2X	358X 2X	359X 2X	360X 2X	361X 2X	362X 2X	363X 2X	364X 2X	365X 2X	366X 2X	367X 2X	368X 2X	369X 2X	370X 2X	371X 2X	372X 2X	373X 2X	374X 2X	375X 2X	376X 2X	377X 2X	378X 2X	379X 2X	380X 2X	381X 2X	382X 2X	383X 2X	384X 2X	385X 2X	386X 2X	387X 2X	388X 2X	389X 2X	390X 2X	391X 2X	392X 2X	393X 2X	394X 2X	395X 2X	396X 2X	397X 2X	398X 2X	399X 2X	400X 2X	401X 2X	402X 2X	403X 2X	404X 2X	405X 2X	406X 2X	407X 2X	408X 2X	409X 2X	410X 2X	411X 2X	412X 2X	413X 2X	414X 2X	415X 2X	416X 2X	417X 2X	418X 2X	419X 2X	420X 2X	421X 2X	422X 2X	423X 2X	424X 2X	425X 2X	426X 2X	427X 2X	428X 2X	429X 2X	430X 2X	431X 2X	432X 2X	433X 2X	434X 2X	435X 2X	436X 2X	437X 2X	438X 2X	439X 2X	440X 2X	441X 2X	442X 2X	443X 2X	444X 2X	445X 2X	446X 2X	447X 2X	448X 2X	449X 2X	450X 2X	451X 2X	452X 2X	453X 2X	454X 2X	455X 2X	456X 2X	457X 2X	458X 2X	459X 2X	460X 2X	461X 2X	462X 2X	463X 2X	464X 2X	465X 2X	466X 2X	467X 2X	468X 2X	469X 2X	470X 2X	471X 2X	472X 2X	473X 2X	474X 2X	475X 2X	476X 2X	477X 2X	478X 2X	479X 2X	480X 2X	481X 2X	482X 2X	483X 2X	484X 2X	485X 2X	486X 2X	487X 2X	488X 2X	489X 2X	490X 2X	491X 2X	492X 2X	493X 2X	494X 2X	495X 2X	496X 2X	497X 2X	498X 2X	499X 2X	500X 2X	501X 2X	502X 2X	503X 2X	504X 2X	505X 2X	506X 2X	507X 2X	508X 2X	509X 2X	510X 2X	511X 2X	512X 2X	513X 2X	514X 2X	515X 2X	516X 2X	517X 2X	518X 2X	519X 2X	520X 2X	521X 2X	522X 2X	523X 2X	524X 2X	525X 2X	526X 2X	527X 2X	528X 2X	529X 2X	530X 2X	531X 2X	532X 2X	533X 2X	534X 2X	535X 2X	536X 2X	537X 2X	538X 2X	539X 2X	540X 2X	541X 2X	542X 2X	543X 2X	544X 2X	545X 2X	546X 2X	547X 2X	548X 2X	549X 2X	550X 2X	551X 2X	552X 2X	553X 2X	554X 2X	555X 2X	556X 2X	557X 2X	558X 2X	559X 2X	560X 2X	561X 2X	562X 2X	563X 2X	564X 2X	565X 2X	566X 2X	567X 2X	568X 2X	569X 2X	570X 2X	571X 2X	572X 2X	573X 2X	574X 2X	575X 2X	576X 2X	577X 2X	578X 2X	579X 2X	580X 2X	581X 2X	582X 2X	583X 2X	584X 2X	585X 2X	586X 2X	587X 2X	588X 2X	589X 2X	590X 2X	591X 2X	592X 2X	593X 2X	594X 2X	595X 2X	596X 2X	597X 2X	598X 2X	599X 2X	600X 2X	601X 2X	602X 2X	603X 2X	604X 2X	605X 2X	606X 2X	607X 2X	608X 2X	609X 2X	610X 2X	611X 2X	612X 2X	613X 2X	614X 2X	615X 2X	616X 2X	617X 2X	618X 2X	619X 2X	620X 2X	621X 2X	622X 2X	623X 2X	624X 2X	625X 2X	626X 2X	627X 2X	628X 2X	629X 2X	630X 2X	631X 2X	632X 2X	633X 2X	634X 2X	635X 2X	636X 2X	637X 2X	638X 2X	639X 2X	640X 2X	641X 2X	642X 2X	643X 2X	644X 2X	645X 2X	646X 2X	647X 2X	648X 2X	649X 2X	650X 2X	651X 2X	652X 2X	653X 2X	654X 2X	655X 2X	656X 2X	657X 2X	658X 2X	659X 2X	660X 2X	661X 2X	662X 2X	663X 2X	664X 2X	665X 2X	666X 2X	667X 2X	668X 2X	669X 2X	670X 2X	671X 2X	672X 2X	673X 2X	674X 2X	675X 2X	676X 2X	677X 2X	678X 2X	679X 2X	680X 2X	681X 2X	682X 2X	683X 2X	684X 2X	685X 2X	686X 2X	687X 2X	688X 2X	689X 2X	690X 2X	691X 2X	692X 2X	693X 2X	694X 2X	695X 2X	696X 2X	697X 2X	698X 2X	699X 2X	700X 2X	701X 2X	702X 2X	703X 2X	704X 2X	705X 2X	706X 2X	707X 2X	708X 2X	709X 2X	710X 2X	711X 2X	712X 2X	713X 2X	714X 2X	715X 2X	716X 2X	717X 2X	718X 2X	719X 2X	720X 2X	721X 2X	722X 2X	723X 2X	724X 2X	725X 2X	726X 2X	727X 2X	728X 2X	729X 2X	730X 2X	731X 2X	732X 2X	733X 2X	734X 2X	735X 2X	736X 2X	737X 2X	738X 2X	739X 2X	740X 2X	741X 2X	742X 2X	743X 2X	744X 2X	745X 2X	746X 2X	747X 2X	748X 2X	749X 2X	750X 2X	751X 2X	752X 2X	753X 2X	754X 2X	755X 2X	756X 2X	757X 2X	758X 2X	759X 2X	760X 2X	761X 2X	762X 2X	763X 2X	764X 2X	765X 2X	766X 2X	767X 2X	768X 2X	769X 2X	770X 2X	771X 2X	772X 2X	773X 2X	774X 2X	775X 2X	776X 2X	777X 2X	778X 2X	779X 2X	780X 2X	781X 2X	782X 2X	783X 2X	784X 2X	785X 2X	786X 2X	787X 2X	788X 2X	789X 2X	790X 2X	791X 2X	792X 2X	793X 2X	794X 2X	795X 2X	796X 2X	797X 2X	798X 2X	799X 2X	800X 2X	801X 2X	802X 2X	803X 2X	804X 2X	805X 2X	806X 2X	807X 2X	808X 2X	809X 2X	810X 2X	811X 2X	812X 2X	813X 2X	814X 2X	815X 2X	816X 2X	817X 2X	818X 2X	819X 2X	820X 2X	821X 2X	822X 2X	823X 2X	824X 2X	825X 2X	826X 2X	827X 2X	828X 2X	829X 2X	830X 2X	831X 2X	832X 2X	833X 2X	834X 2X	835X 2X	836X 2X	837X 2X	838X 2X	839X 2X	840X 2X	841X 2X	842X 2X	843X 2X	844X 2X	845X 2X	846X 2X	847X 2X	848X 2X	849X 2X	850X 2X	851X 2X	852X 2X	853X 2X	854X 2X	855X 2X	856X 2X	857X 2X	858X 2X	859X 2X	860X 2X	861X 2X	862X 2X	863X 2X	864X 2X	865X 2X	866X 2X	867X 2X	868X 2X	869X 2X	870X 2X	871X 2X	872X 2X	873X 2X	874X 2X	875X 2X	876X 2X	877X 2X	878X 2X	879X 2X	880X 2X	881X 2X	882X 2X	883X 2X	884X 2X	885X 2X	886X 2X	887X 2X	888X 2X	889X 2X	890X 2X	891X 2X	892X 2X	893X 2X	894X 2X	895X 2X	896X 2X	897X 2X	898X 2X	899X 2X	900X 2X	901X 2X	902X 2X	903X 2X	904X 2X	905X 2X	906X 2X	907X 2X	908X 2X	909X 2X	910X 2X	911X 2X	912X 2X	913X 2X	914X 2X	915X 2X	916X 2X	917X 2X	918X 2X	919X 2X	920X 2X	921X 2X	922X 2X	923X 2X	924X 2X	925X 2X	926X 2X	927X 2X	928X 2X	929X 2X	930X 2X	931X 2X	932X 2X	933X 2X	934X 2X	935X 2X	936X 2X	937X 2X	938X 2X	939X 2X	940X 2X	941X 2X	942X 2X	943X 2X	944X 2X	945X 2X	946X 2X	947X 2X	948X 2X	949X 2X	950X 2X	951X 2X	952X 2X	953X 2X	954X 2X	955X 2X	956X 2X	957X 2X	958X 2X	959X 2X	960X 2X	961X 2X	962X 2X	963X 2X	964X 2X	965X 2X	966X 2X	967X 2X	968X 2X	969X 2X	970X 2X	971X 2X	972X 2X	973X 2X	974X 2X	975X 2X	976X 2X	977X 2X	978X 2X	979X 2X	980X 2X	981X 2X	982X 2X	983X 2X	984X 2X	985X 2X	986X 2X	987X 2X	988X 2X	989X 2X	990X 2X	991X 2X	992X 2X	993X 2X	994X 2X	995X 2X	996X 2X	997X 2X	998X 2X	999X 2X	1000X 2X	1001X 2X	1002X 2X	1003X 2X	1004X 2X	1005X 2X	1006X 2X	1007X 2X	1008X 2X	1009X 2X	1010X 2X	1011X 2X	1012X 2X	1013X 2X	1014X 2X	1015X 2X	1016X 2X	1017X 2X	1018X 2X	1019X 2X	1020X 2X	1021X 2X	1022X 2X	1023X 2X	1024X 2X	1025X 2X	1026X 2X	1027X 2X	1028X 2X	1029X 2X	1030X 2X	1031X 2X	1032X 2X	1033X 2X	1034X 2X	1035X 2X</

0.4375 - 7/16 in.

438 IN. PLATE (AREA= 6.51 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK			
7X 7X .250/ .438T		16.35	44.6	24.7	125.2	3.3	2.0	5.1	4.81	7.44	.250	7.00	.438		1.97	
10X 4X .313/ .438T		16.53	60.4	25.8	136.8	4.2	3.3	7.6	4.88	10.44	.313	4.00	.438		3.40	
9X 6X .250/ .438T		16.53	56.8	28.9	189.2	4.1	3.3	6.5	4.88	9.44	.250	6.00	.438		3.39	
10X 5X .313/ .375T		17.00	60.9	27.1	203.0	4.2	3.3	7.5	5.00	10.38	.313	5.00	.375		2.22	
8X 7X .250/ .438T		17.20	51.2	28.6	162.7	3.8	3.2	5.7	5.06	8.44	.250	7.00	.438		3.42	
10X 4X .313/ .500T		17.44	61.8	28.1	211.4	4.3	3.4	7.5	5.13	10.50	.313	4.00	.500		2.47	
9X 7X .250/ .438T		18.05	57.8	32.6	206.0	4.2	3.6	6.3	5.31	9.44	.250	7.00	.438		3.39	
10X 6X .313/ .375T		18.29	62.4	30.6	222.2	4.3	3.6	7.3	5.38	10.38	.313	6.00	.375		3.42	
10X 5X .313/ .500T		19.14	63.6	32.8	236.5	4.4	3.7	7.2	5.63	10.50	.313	5.00	.500		3.40	
10X 6X .313/ .438T		19.55	63.8	34.0	241.3	4.4	3.8	7.1	5.75	10.44	.313	6.00	.438		3.44	
10X 5X .313/ .563T		20.20	64.7	35.6	252.5	4.5	3.9	7.1	5.94	10.56	.313	5.00	.563		3.42	
10X 6X .313/ .500T		20.84	65.0	37.4	259.9	4.5	4.0	6.9	6.13	10.50	.313	6.00	.500		3.40	
10X 7X .313/ .438T		21.05	65.0	38.1	261.3	4.5	4.0	6.9	6.19	10.44	.313	7.00	.438		3.11	
9X 7X .313/ .500T		21.45	59.3	37.3	227.3	4.2	3.8	6.1	6.31	9.50	.313	7.00	.500		4.84	
12X 4X .375/ .469T		21.69	74.8	36.1	314.3	4.9	4.2	8.7	6.38	12.47	.375	4.00	.469		3.44	
10X 6X .313/ .563T		22.10	66.1	40.8	277.5	4.6	4.2	6.8	6.50	10.56	.313	6.00	.563		3.42	
10X 7X .313/ .500T		22.54	66.2	42.1	281.3	4.6	4.3	6.7	6.63	10.50	.313	7.00	.500		4.86	
12X 4X .375/ .531T		22.54	76.2	38.8	333.2	5.0	4.4	8.6	6.63	12.53	.375	4.00	.531		3.11	
9X 7X .313/ .563T		22.95	60.3	40.9	243.5	4.3	4.0	6.0	6.75	9.56	.313	7.00	.563		3.44	
9X 8X .313/ .500T		23.15	60.1	41.5	244.0	4.3	4.1	5.9	6.81	9.50	.313	8.00	.500		4.89	
12X 5X .375/ .469T		23.26	77.1	41.3	347.0	5.1	4.5	8.4	6.84	12.47	.375	5.00	.469		3.44	
12X 4X .375/ .594T		23.39	77.6	41.4	351.7	5.1	4.5	8.5	6.88	12.59	.375	4.00	.594		3.42	
10X 7X .313/ .563T		24.00	67.3	46.0	300.2	4.7	4.5	6.5	7.06	10.56	.313	7.00	.563		4.91	
10X 8X .313/ .500T		24.24	67.2	46.8	301.6	4.7	4.5	6.4	7.13	10.50	.313	8.00	.500		3.13	
12X 4X .375/ .656T		24.24	78.8	43.9	369.3	5.2	4.7	8.4	7.13	12.66	.375	4.00	.656		4.89	
9X 8X .313/ .563T		24.85	61.1	45.5	260.7	4.3	4.3	5.7	7.31	9.56	.313	6.00	.563		3.44	
12X 6X .375/ .469T		24.85	78.9	46.4	377.1	5.2	4.8	8.1	7.31	12.47	.375	5.00	.469		3.44	
12X 5X .375/ .594T		25.40	79.8	47.8	389.5	5.3	4.9	8.1	7.47	12.59	.375	5.00	.594		4.89	
10X 8X .313/ .563T		25.94	68.2	51.3	321.9	4.8	4.7	6.3	7.63	10.56	.313	8.00	.563		3.44	
12X 5X .375/ .656T		26.45	81.1	51.0	410.2	5.4	5.1	8.0	7.78	12.66	.375	5.00	.656		4.91	
12X 7X .375/ .469T		26.45	80.5	51.5	405.4	5.3	5.0	7.9	7.78	12.47	.375	7.00	.469		3.44	
12X 6X .375/ .594T		27.40	81.7	54.2	424.6	5.4	5.2	7.8	8.06	12.59	.375	6.00	.594		4.89	
12X 7X .375/ .531T		27.95	81.9	56.2	432.2	5.4	5.3	7.7	8.22	12.53	.375	7.00	.531		4.86	
12X 6X .375/ .656T		28.70	82.9	58.1	447.2	5.5	5.4	7.7	8.44	12.66	.375	6.00	.656		4.91	
12X 7X .375/ .594T		29.44	83.2	60.7	457.0	5.5	5.5	7.5	8.66	12.59	.375	7.00	.594		4.89	
12X 8X .375/ .531T		29.75	83.2	61.8	459.9	5.5	5.5	7.4	8.75	12.53	.375	8.00	.531		4.86	
14X 5X .438/ .531T		29.85	94.1	56.7	529.6	5.9	5.6	9.3	8.78	14.53	.438	5.00	.531		6.56	
14X 5X .438/ .594T		30.91	95.7	60.4	556.1	6.0	5.8	9.2	9.09	14.59	.438	5.00	.594		6.58	
12X 8X .375/ .594T		31.45	84.5	67.1	487.0	5.6	5.8	7.3	9.25	12.59	.375	8.00	.594		4.89	
12X 9X .375/ .531T		31.55	84.3	67.6	486.7	5.6	5.8	7.2	9.28	12.53	.375	9.00	.531		4.86	
14X 6X .438/ .531T		31.65	96.4	63.3	572.0	6.0	5.9	9.0	9.31	14.53	.438	6.00	.531		6.56	
14X 5X .438/ .656T		31.99	97.2	64.1	502.9	6.1	6.0	9.1	9.41	14.66	.438	5.00	.656		6.61	
16X 5X .438/ .531T		32.84	109.3	67.6	708.9	6.6	6.5	10.5	9.66	16.53	.438	5.00	.531		7.43	
14X 6X .438/ .594T		32.95	98.0	67.7	601.7	6.1	6.1	8.9	9.59	14.59	.438	6.00	.594		6.58	
14X 5X .438/ .719T		33.05	98.5	67.7	608.0	6.1	6.2	9.0	9.72	14.72	.438	5.00	.719		6.64	

0.4375 - 7/16 in.



0.438 IN. PLATE (AREA= 6.51 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA	
	WT/FT	ZPL	ZFL						INERTIA	WEB THICK	FLANGE WIDTH		THICK
12X 8X .375/.556T	33.15	85.6	72.2	513.1	5.6	6.0	7.1	9.75	12.66	.375	8.00	.656	4.91
14X 7X .438/.531T	33.46	98.4	69.9	611.7	6.1	6.2	8.7	9.84	14.53	.438	7.00	.531	6.56
16X 5X .438/.594T	33.90	111.1	71.8	742.9	6.7	6.7	10.3	9.97	16.59	.438	5.00	.594	7.46
14X 6X .438/.556T	34.20	99.5	72.1	631.2	6.2	6.3	8.8	10.06	14.66	.438	6.00	.556	6.61
16X 6X .438/.531T	34.65	112.0	75.2	763.2	6.8	6.8	10.2	10.19	16.53	.438	6.00	.531	7.43
16X 5X .438/.556T	34.95	112.8	76.0	776.1	6.8	6.9	10.2	10.28	16.66	.438	5.00	.556	7.49
14X 7X .438/.594T	34.95	99.9	75.1	644.2	6.2	6.4	8.6	10.28	14.59	.438	7.00	.594	6.58
14X 8X .438/.531T	35.29	100.0	76.5	648.8	6.2	6.5	8.5	10.38	14.53	.438	8.00	.531	6.56
16X 6X .438/.594T	35.90	113.0	80.2	801.8	6.9	7.0	10.0	10.56	16.59	.438	6.00	.594	7.46
16X 5X .438/.519T	36.01	114.4	80.1	808.5	6.9	7.1	10.1	10.59	16.72	.438	5.00	.519	7.51
16X 7X .438/.531T	36.45	114.3	82.6	813.4	6.9	7.1	9.8	10.72	16.53	.438	7.00	.531	7.43
14X 8X .438/.594T	36.99	101.6	82.4	683.9	6.3	6.7	8.3	10.88	14.59	.438	8.00	.594	6.58
14X 9X .438/.531T	37.09	101.5	83.1	683.6	6.3	6.7	8.2	10.91	14.53	.438	9.00	.531	6.56
16X 7X .438/.594T	37.94	116.1	88.4	858.8	7.0	7.4	9.7	11.16	16.59	.438	7.00	.594	7.46
16X 8X .438/.531T	38.25	116.2	89.9	860.3	7.0	7.4	9.6	11.25	16.53	.438	8.00	.531	7.43
16X 6X .438/.719T	38.45	117.1	90.1	873.8	7.0	7.5	9.7	11.31	16.72	.438	6.00	.719	7.51
16X 7X .438/.556T	39.41	117.8	94.2	895.4	7.0	7.6	9.5	11.59	16.66	.438	7.00	.556	7.49
16X 8X .438/.594T	39.95	118.1	96.6	904.9	7.0	7.7	9.4	11.75	16.59	.438	8.00	.594	7.46
16X 9X .438/.531T	40.05	117.9	97.3	984.6	7.0	7.7	9.3	11.78	16.53	.438	9.00	.531	7.43
16X 7X .438/.719T	40.90	119.4	100.1	934.2	7.1	7.8	9.3	12.03	16.72	.438	7.00	.719	7.51
16X 8X .438/.656T	41.65	119.8	103.3	948.3	7.1	7.9	9.2	12.25	16.66	.438	8.00	.656	7.49
18X 5X .500/.556T	41.75	131.6	92.3	1035.7	7.4	7.9	11.2	12.28	18.66	.500	5.00	.556	9.55
16X 9X .438/.594T	41.96	119.8	104.9	952.4	7.1	8.0	9.1	12.34	16.59	.438	9.00	.594	7.46
16X 5X .500/.875T	42.09	120.0	93.0	907.4	6.9	7.6	9.8	12.38	16.88	.500	5.00	.875	8.66
18X 6X .500/.594T	42.70	132.8	97.0	1066.6	7.5	8.0	11.0	12.56	18.59	.500	6.00	.594	9.51
18X 5X .500/.719T	42.81	133.4	96.8	1074.6	7.5	8.1	11.1	12.59	18.72	.500	5.00	.719	9.58
14X 10X .438/.656T	43.15	105.6	104.2	791.8	6.4	7.5	7.6	12.69	14.66	.438	10.00	.656	6.61
16X 8X .438/.719T	43.35	121.3	109.9	989.6	7.2	8.2	9.0	12.75	16.72	.438	8.00	.719	7.51
16X 9X .438/.656T	43.89	121.4	112.4	997.8	7.2	8.2	8.9	12.91	16.66	.438	9.00	.656	7.49
18X 6X .500/.656T	44.00	134.8	102.4	1111.3	7.6	8.2	10.9	12.94	18.66	.500	6.00	.656	9.55
16X 10X .438/.594T	44.00	121.3	113.3	997.3	7.2	8.2	8.8	12.94	16.59	.438	10.00	.594	7.46
14X 11X .438/.656T	45.36	106.7	112.0	824.9	6.4	7.7	7.4	13.34	14.66	.438	11.00	.656	6.61
16X 9X .438/.719T	45.80	123.0	119.9	1042.0	7.2	8.5	8.7	13.47	16.72	.438	9.00	.719	7.51
16X 10X .438/.656T	46.10	122.9	121.4	1044.4	7.2	8.5	8.6	13.56	16.66	.438	10.00	.656	7.49
18X 7X .500/.719T	47.70	139.5	118.8	1229.4	7.7	8.8	10.3	14.03	18.72	.500	7.00	.719	9.58
18X 6X .500/.875T	48.45	140.9	121.3	1259.2	7.8	8.9	10.4	14.25	18.88	.500	6.00	.875	9.66
18X 8X .500/.719T	50.15	141.9	129.7	1298.5	7.8	9.1	10.0	14.75	18.72	.500	8.00	.719	9.58
18X 9X .500/.656T	50.69	142.2	132.5	1309.7	7.8	9.2	9.9	14.91	18.66	.500	9.00	.656	9.55
18X 10X .500/.594T	50.90	142.0	133.4	1309.1	7.8	9.2	9.8	14.94	18.59	.500	10.00	.594	9.51
18X 7X .500/.875T	51.44	143.7	134.4	1341.7	7.9	9.3	10.0	15.13	18.88	.500	7.00	.875	9.66
18X 9X .500/.719T	52.60	144.0	140.5	1362.7	7.9	9.5	9.7	15.47	18.72	.500	9.00	.719	9.58
18X 10X .500/.656T	52.90	144.0	142.3	1366.9	7.9	9.5	9.6	15.56	18.66	.500	10.00	.656	9.55
18X 8X .500/.875T	54.40	146.1	147.6	1418.5	7.9	9.7	9.6	16.00	18.88	.500	8.00	.875	9.66
18X 11X .500/.656T	55.15	145.7	152.3	1422.0	7.9	9.8	9.3	16.22	18.66	.500	11.00	.656	9.55
18X 11X .500/.719T	57.49	147.5	162.4	1481.1	8.0	10.0	9.1	16.91	18.72	.500	11.00	.719	9.58

0.438 IN. PLATE (AREA= 6.51 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
		ZPL	ZFL								WIDTH	THICK	
18X12X .500/.719T	59.94	149.0	173.2	1534.3	8.0	10.3	8.9	17.63	18.72	.500	12.00	.719	9.58
18X10X .500/.875T	60.35	150.0	173.7	1554.7	8.0	10.4	9.0	17.75	18.88	.500	10.00	.875	9.66
21X 8X .625/.875T	68.44	184.6	185.6	2065.7	9.8	11.2	11.1	20.13	21.88	.625	8.00	.875	13.95
21X10X .625/.750T	70.14	185.7	195.2	2111.7	9.8	11.4	10.8	20.63	21.75	.625	10.00	.750	13.87
21X 9X .625/.875T	71.40	187.5	200.5	2162.7	8.9	11.5	10.8	21.00	21.88	.625	9.00	.875	13.95
21X11X .625/.750T	72.69	188.1	208.2	2192.3	8.9	11.7	10.5	21.38	21.75	.625	11.00	.750	13.87
21X10X .625/.875T	74.39	190.2	215.5	2254.6	8.9	11.9	10.5	21.88	21.88	.625	10.00	.875	13.95
21X 9X .625/1.125T	79.05	195.1	236.2	2410.7	9.0	12.4	10.2	23.25	22.13	.625	9.00	1.125	14.18
21X12X .625/.875T	80.34	194.6	244.8	2419.3	9.0	12.4	9.9	23.63	21.88	.625	12.00	.875	13.95
24X 9X .688/.875T	82.89	228.0	242.0	2971.7	9.8	13.0	12.3	24.38	24.88	.688	9.00	.875	17.42
21X13X .625/.875T	83.38	196.5	259.5	2495.6	9.0	12.7	9.6	24.50	21.88	.625	13.00	.875	13.95
24X10X .688/.875T	85.85	231.3	258.5	3090.8	9.9	13.4	12.0	25.25	24.88	.688	10.00	.875	17.42
21X14X .625/.875T	86.29	198.2	274.1	2567.0	9.0	13.0	9.4	25.38	21.88	.625	14.00	.875	13.95
24X 8X .688/1.125T	86.70	233.6	268.6	3149.2	9.9	13.5	12.1	25.50	25.13	.688	8.00	1.125	17.59
24X11X .688/.875T	88.54	234.4	275.0	3203.4	9.9	13.7	11.6	26.13	24.88	.688	11.00	.875	17.42
24X 9X .688/1.125T	90.54	237.4	281.9	3294.6	10.0	13.9	11.7	26.63	25.13	.688	9.00	1.125	17.59
24X12X .688/.875T	91.80	237.1	291.7	3311.4	9.9	14.0	11.4	27.00	24.88	.688	12.00	.875	17.42
24X13X .688/.875T	94.79	239.6	308.2	3413.3	10.0	14.2	11.1	27.88	24.88	.688	13.00	.875	17.42
24X11X .688/1.125T	98.13	243.8	323.5	3554.3	10.0	14.6	11.0	28.88	25.13	.688	11.00	1.125	17.59
27X 8X .750/1.125T	99.45	280.2	309.0	4197.5	10.8	15.0	13.6	29.25	28.13	.750	8.00	1.125	21.43
27X11X .750/.875T	101.59	281.5	324.8	4270.0	10.8	15.2	13.1	29.88	27.88	.750	11.00	.875	21.24
27X 9X .750/1.125T	103.29	285.0	332.3	4382.5	10.9	15.4	13.2	30.38	28.13	.750	9.00	1.125	21.43
27X12X .750/.875T	104.55	285.0	343.1	4408.2	10.9	15.5	12.8	30.75	27.88	.750	12.00	.875	21.24
27X10X .750/1.125T	107.10	289.3	355.4	4555.6	10.9	15.7	12.8	31.50	28.13	.750	10.00	1.125	21.43
27X11X .750/1.125T	110.94	293.1	378.5	4719.2	11.0	16.1	12.5	32.63	28.13	.750	11.00	1.125	21.43
27X 9X .875/1.375T	122.40	311.7	387.5	4978.4	10.8	16.0	12.8	36.00	28.38	.875	9.00	1.375	25.22
30X10X .875/1.375T	136.00	366.1	473.5	6568.9	11.9	17.9	13.9	40.00	31.38	.875	10.00	1.375	27.84
30X13X .875/1.125T	138.99	367.5	497.3	6671.4	11.9	18.2	13.4	40.88	31.13	.875	13.00	1.125	27.62
30X11X .875/1.375T	140.69	371.2	503.9	6800.6	11.9	18.3	13.5	41.38	31.38	.875	11.00	1.375	27.84
30X14X .875/1.125T	142.80	371.4	522.6	6853.4	11.9	18.5	13.1	42.00	31.13	.875	14.00	1.125	27.62
33X14X .875/1.375T	154.70	383.9	535.2	7425.4	11.9	19.3	12.5	45.50	31.38	.875	14.00	1.375	27.84
33X10X1.000/1.500T	163.20	450.4	531.5	8867.5	12.8	19.7	15.2	48.00	34.50	1.000	10.00	1.500	34.94
33X11X1.000/1.375T	163.64	450.0	536.6	8865.8	12.7	19.7	15.1	48.13	34.38	1.000	11.00	1.375	34.82
36X13X1.000/1.125T	172.14	505.8	648.0	10679.1	13.7	21.1	16.5	50.63	37.13	1.000	13.00	1.125	37.57
33X13X1.000/1.375T	172.99	461.4	652.6	9411.3	12.8	20.4	14.4	50.88	34.38	1.000	13.00	1.375	34.82
36X11X1.000/1.375T	173.84	510.5	657.3	10455.8	13.7	21.3	16.5	51.13	37.38	1.000	11.00	1.375	37.82
36X10X1.000/1.750T	181.38	525.4	711.2	11538.9	13.9	22.0	16.2	53.50	37.75	1.000	10.00	1.750	38.19
33X16X1.000/1.375T	187.00	475.5	751.2	10138.5	12.8	21.3	13.5	55.00	34.38	1.000	16.00	1.375	34.82

0.4375 - 7/16 in.



500 IN. PLATE (AREA= 8.50 SQ.IN.)

***** BEAM DIMENSIONS *****										SHEAR AREA	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	
*****										*****	

0.5000 - 1/2 in.

•500 IN. PLATE (AREA= 0.50 SQ.IN.)

***** BEAM DIMENSIONS *****													
NOMINAL SIZE		SECTION MODULUS				BEAM DIMENSIONS				FLANGE		SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA	SHEAR
7X 7X .250/.438T	16.35	56.0	137.8	3.2	2.5	5.5	4.81	7.44	.250	7.00	.438	1.99	1.99
10X 4X .313/.438T	16.59	75.1	213.9	4.0	2.8	8.1	4.88	10.44	.313	4.00	.438	3.42	3.42
9X 6X .250/.438T	16.59	71.2	207.1	3.9	2.9	7.0	4.88	9.44	.250	6.00	.438	2.49	2.49
10X 5X .313/.375T	17.00	75.0	221.0	4.0	2.9	8.0	5.00	10.38	.313	5.00	.375	3.41	3.41
8X 7X .250/.438T	17.20	64.2	179.0	3.6	2.8	6.2	5.06	8.44	.250	7.00	.438	2.24	2.24
10X 4X .313/.500T	17.44	76.9	230.4	4.1	3.0	8.0	5.13	10.50	.313	4.00	.500	3.44	3.44
9X 7X .250/.438T	18.05	72.6	226.7	4.1	3.1	6.8	5.31	9.44	.250	7.00	.438	2.49	2.49
10X 6X .313/.375T	18.29	77.7	242.9	4.2	3.1	7.8	5.38	10.38	.313	6.00	.375	3.41	3.41
10X 5X .313/.500T	19.14	79.3	259.2	4.3	3.3	7.7	5.63	10.50	.313	5.00	.500	3.44	3.44
10X 6X .313/.438T	19.55	79.5	264.8	4.3	3.3	7.6	5.75	10.44	.313	6.00	.438	3.42	3.42
10X 5X .313/.563T	20.20	80.7	277.6	4.4	3.4	7.6	5.94	10.56	.313	5.00	.563	3.46	3.46
10X 6X .313/.500T	20.84	81.2	286.3	4.4	3.5	7.5	6.13	10.50	.313	6.00	.500	3.44	3.44
10X 7X .313/.438T	21.05	81.1	288.0	4.4	3.5	7.4	6.19	10.44	.313	7.00	.438	3.42	3.42
9X 7X .313/.500T	21.45	74.1	251.6	4.1	3.4	6.6	6.31	9.50	.313	7.00	.500	3.13	3.13
12X 4X .375/.469T	21.69	92.5	343.6	4.8	3.7	9.3	6.38	12.47	.375	4.00	.469	4.86	4.86
10X 6X .313/.563T	22.10	82.6	306.7	4.5	3.7	7.3	6.50	10.56	.313	6.00	.563	3.46	3.46
10X 7X .313/.500T	22.54	82.7	311.4	4.5	3.8	7.2	6.63	10.50	.313	7.00	.500	3.44	3.44
12X 4X .375/.531T	22.54	94.3	365.0	4.9	3.9	9.2	6.63	12.53	.375	4.00	.531	4.89	4.89
9X 7X .313/.563T	22.95	75.5	270.7	4.2	3.6	6.5	6.75	9.56	.313	7.00	.563	3.15	3.15
9X 8X .313/.500T	23.15	75.3	271.4	4.2	3.6	6.4	6.81	9.50	.313	8.00	.500	3.13	3.13
12X 5X .375/.469T	23.26	95.4	380.9	5.0	4.0	9.0	6.84	12.47	.375	5.00	.469	4.86	4.86
12X 4X .375/.594T	23.39	96.0	386.1	5.0	4.0	9.1	6.88	12.59	.375	4.00	.594	4.91	4.91
10X 7X .313/.563T	24.00	84.1	333.6	4.6	4.0	7.1	7.06	10.56	.313	7.00	.563	3.46	3.46
10X 8X .313/.500T	24.24	84.0	335.4	4.6	4.0	7.0	7.13	10.50	.313	8.00	.500	3.44	3.44
12X 4X .375/.656T	24.24	97.5	406.1	5.1	4.2	9.0	7.13	12.66	.375	4.00	.656	4.94	4.94
9X 8X .313/.563T	24.85	76.5	291.3	4.3	3.8	6.3	7.31	9.56	.313	8.00	.563	3.15	3.15
12X 6X .375/.469T	24.85	97.8	415.5	5.1	4.2	8.7	7.31	12.47	.375	6.00	.469	4.86	4.86
12X 5X .375/.594T	25.40	98.9	429.6	5.2	4.3	8.7	7.47	12.59	.375	5.00	.594	4.91	4.91
10X 8X .313/.563T	25.94	85.4	359.5	4.7	4.2	6.9	7.63	10.56	.313	8.00	.563	3.46	3.46
12X 5X .375/.656T	26.45	100.5	453.5	5.3	4.5	8.6	7.78	12.66	.375	5.00	.656	4.94	4.94
12X 7X .375/.469T	26.45	99.8	448.3	5.2	4.5	8.5	7.78	12.47	.375	7.00	.469	4.86	4.86
12X 6X .375/.594T	27.40	101.3	470.4	5.3	4.6	8.4	8.06	12.59	.375	6.00	.594	4.91	4.91
12X 7X .375/.531T	27.95	101.6	479.5	5.4	4.7	8.3	8.22	12.53	.375	7.00	.531	4.89	4.89
12X 6X .375/.656T	28.70	102.8	496.8	5.4	4.8	8.3	8.44	12.66	.375	6.00	.656	4.94	4.94
12X 7X .375/.594T	29.44	103.2	508.6	5.4	4.9	8.2	8.66	12.59	.375	7.00	.594	4.91	4.91
12X 8X .375/.531T	29.75	103.2	512.2	5.4	5.0	8.1	8.75	12.53	.375	8.00	.531	4.89	4.89
14X 5X .438/.531T	29.85	115.6	583.8	5.8	5.1	10.0	8.78	14.53	.438	5.00	.531	6.58	6.58
14X 5X .438/.594T	30.91	117.5	614.1	5.9	5.2	9.9	9.03	14.59	.438	5.00	.594	6.61	6.61
12X 8X .375/.531T	31.45	104.8	544.1	5.5	5.2	7.9	9.25	12.59	.375	8.00	.594	4.91	4.91
12X 9X .375/.531T	31.55	104.7	544.0	5.5	5.2	7.8	9.25	12.53	.375	9.00	.531	4.89	4.89
14X 6X .438/.531T	31.65	118.4	632.5	6.0	5.3	9.7	9.31	14.53	.438	6.00	.531	6.58	6.58
14X 5X .438/.656T	31.99	119.3	644.9	6.0	5.4	9.8	9.41	14.66	.438	5.00	.656	6.64	6.64
16X 5X .438/.531T	32.84	133.7	781.6	6.6	5.8	11.2	9.66	16.53	.438	5.00	.531	7.46	7.46
14X 6X .438/.594T	32.95	120.4	666.8	6.1	5.5	9.6	9.69	14.59	.438	6.00	.594	6.61	6.61
14X 5X .438/.719T	33.05	121.0	673.8	6.1	5.6	9.7	9.72	14.72	.438	5.00	.719	6.67	6.67

0.5000 - 1/2 in.



500 IN. PLATE (AREA= 8.50 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YF	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL					WEB THICK	FLANGE WIDTH	
12X 8X .375/.656T	33.15	106.3	74.2	5.6	7.7	9.75	12.66	.375	8.00	.656
14X 7X .438/.531T	33.46	120.8	72.1	6.1	9.4	9.84	14.53	.438	7.00	.531
16X 5X .438/.594T	33.90	135.9	74.2	6.7	11.1	9.97	16.59	.438	5.00	.594
14X 6X .438/.656T	34.20	122.2	74.4	6.1	9.4	10.06	14.66	.438	8.00	.656
16X 6X .438/.531T	34.65	137.0	77.6	6.2	10.9	10.19	16.53	.438	6.00	.531
16X 5X .438/.656T	34.95	138.0	78.5	6.8	10.9	10.28	16.66	.438	5.00	.656
14X 7X .438/.594T	34.95	122.8	77.4	6.2	9.3	10.28	14.59	.438	7.00	.594
14X 8X .438/.531T	35.29	122.9	78.8	5.9	9.2	10.38	14.53	.438	8.00	.531
16X 6X .438/.594T	35.90	139.2	82.8	6.4	10.7	10.56	16.59	.438	6.00	.594
16X 5X .438/.719T	36.01	139.9	82.8	6.4	10.8	10.59	16.72	.438	5.00	.719
16X 7X .438/.531T	36.45	139.8	95.3	6.8	10.6	10.72	16.53	.438	7.00	.531
14X 8X .438/.594T	36.99	124.8	85.0	6.3	9.0	10.88	14.59	.438	8.00	.594
14X 9X .438/.531T	37.03	124.7	85.6	6.1	8.9	10.91	14.53	.438	9.00	.531
16X 7X .438/.594T	37.94	142.0	91.3	7.0	10.4	11.16	16.59	.438	7.00	.594
16X 8X .438/.531T	38.25	142.2	92.8	6.7	10.3	11.25	16.53	.438	8.00	.531
16X 6X .438/.719T	38.45	143.2	93.0	6.8	10.4	11.31	16.72	.438	6.00	.719
16X 7X .438/.656T	39.41	144.1	97.2	7.0	6.9	10.2	11.59	.438	7.00	.656
16X 8X .438/.594T	39.95	144.4	99.7	7.1	7.0	10.1	11.75	.438	8.00	.594
16X 9X .438/.531T	40.05	144.3	100.4	7.1	7.0	10.0	11.78	.438	9.00	.531
16X 7X .438/.719T	40.90	146.0	103.3	7.1	10.1	12.03	16.72	.438	7.00	.719
16X 8X .438/.656T	41.65	146.5	105.6	7.4	7.2	9.9	12.25	.438	8.00	.656
18X 5X .500/.656T	41.75	159.3	95.6	7.1	7.2	12.0	12.28	.500	5.00	.656
16X 9X .438/.594T	41.96	146.5	105.2	7.1	7.3	9.8	12.34	.438	9.00	.594
16X 5X .500/.875T	42.09	145.9	96.3	6.9	10.5	12.30	16.88	.500	5.00	.875
18X 6X .500/.594T	42.70	160.8	100.5	7.5	7.3	11.7	12.56	.500	6.00	.594
18X 5X .500/.719T	42.81	161.5	100.3	7.5	7.4	11.9	12.59	.500	5.00	.719
14X 10X .438/.656T	43.15	129.9	107.4	6.5	8.3	12.69	14.66	.438	10.00	.656
18X 8X .438/.719T	43.35	148.4	113.5	7.2	7.5	9.6	12.75	.438	8.00	.719
16X 9X .438/.656T	43.89	148.5	115.9	7.2	7.5	9.6	12.91	.438	9.00	.656
18X 6X .500/.656T	44.00	163.2	106.0	7.6	7.5	11.6	12.94	.500	6.00	.656
16X 10X .438/.594T	44.00	148.4	116.8	7.2	7.5	9.6	12.94	.438	10.00	.594
14X 11X .438/.656T	45.36	131.2	115.4	6.5	7.1	8.1	13.34	.438	11.00	.656
18X 9X .438/.719T	45.88	150.4	123.8	7.3	7.8	9.4	13.47	.438	9.00	.719
16X 10X .438/.656T	46.10	150.4	125.3	7.3	7.8	9.4	13.56	.438	10.00	.656
18X 7X .500/.719T	46.70	168.8	123.0	7.8	8.1	11.1	14.03	.500	7.00	.719
18X 6X .500/.875T	48.45	170.4	125.6	7.8	8.2	11.2	14.25	.500	6.00	.875
18X 8X .500/.719T	50.15	171.7	134.3	7.9	8.4	10.8	14.75	.500	8.00	.719
18X 9X .500/.656T	50.69	172.0	137.1	7.9	8.5	10.7	14.91	.500	9.00	.656
18X 10X .500/.594T	50.80	171.8	138.0	7.9	8.5	10.6	14.94	.500	10.00	.594
18X 7X .500/.875T	51.44	173.8	139.2	8.0	8.6	10.8	15.13	.500	7.00	.875
18X 9X .500/.719T	52.60	174.2	145.4	8.0	8.7	10.5	15.47	.500	9.00	.719
18X 10X .500/.656T	52.90	174.2	147.2	8.0	8.8	10.4	15.56	.500	10.00	.656
18X 8X .500/.875T	54.40	176.7	152.8	8.1	9.0	10.4	16.00	.500	8.00	.875
18X 11X .500/.656T	55.15	176.2	157.5	8.0	9.0	10.1	16.22	.500	11.00	.656
18X 11X .500/.719T	57.49	178.4	168.0	8.1	9.3	9.9	16.91	.500	11.00	.719

0.5000 - 1/2 in.

•500 IN. PLATE (AREA= 8.50 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB	FLANGE	THICK	
10X12X .500/.719T	59.94	180.2	179.1	1726.3	8.1	9.6	9.6	17.63	18.72	.500	12.00	.719	9.61
10X10X .500/.875T	60.35	181.3	179.8	1749.4	8.2	9.6	9.7	17.75	18.88	.500	10.00	.875	9.69
21X 8X .625/.875T	68.44	216.9	192.8	2294.3	9.0	10.5	11.9	20.13	21.88	.625	8.00	.875	13.99
21X10X .625/.750T	70.14	220.3	202.6	2348.1	9.0	10.7	11.6	20.63	21.75	.625	10.00	.750	13.91
21X 9X .625/.875T	71.40	222.4	208.2	2406.1	9.0	10.8	11.6	21.00	21.88	.625	9.00	.875	13.99
21X11X .625/.750T	72.69	223.0	216.0	2441.3	9.0	10.9	11.3	21.38	21.75	.625	11.00	.750	13.91
21X10X .625/.875T	74.39	225.4	223.7	2512.6	9.1	11.1	11.2	21.68	21.68	.625	10.00	.875	13.99
21X 9X .625/1.125T	79.05	231.8	245.2	2692.0	9.2	11.7	11.0	23.25	22.13	.625	12.00	1.125	14.14
21X12X .625/.875T	80.34	230.5	253.9	2704.3	9.2	11.7	10.6	23.63	21.88	.625	9.00	.875	13.99
24X 9X .688/.875T	82.89	266.8	251.5	3255.7	10.0	12.3	13.1	24.38	24.88	.688	9.00	.875	17.46
21X13X .625/.875T	83.30	232.8	269.2	2793.6	9.2	12.0	12.7	25.25	24.88	.688	10.00	.875	17.46
24X10X .688/.875T	85.85	270.7	268.5	3421.2	10.1	12.6	12.7	25.25	24.88	.688	10.00	.875	17.46
21X14X .625/.875T	86.29	234.7	284.3	2877.5	9.2	12.3	10.1	25.38	21.88	.688	14.00	.875	13.99
24X 8X .688/1.125T	86.70	273.2	270.9	3485.8	10.1	12.8	12.9	25.50	25.13	.688	8.00	1.125	17.63
24X11X .688/.875T	88.54	274.1	285.6	3549.8	10.1	12.9	12.4	26.13	24.88	.688	11.00	.875	17.46
24X 9X .688/1.125T	90.54	277.5	292.9	3652.2	10.2	13.2	12.5	26.63	25.13	.688	9.00	1.125	17.63
24X12X .688/.875T	91.80	277.3	302.8	3673.6	10.2	13.2	12.1	27.00	24.88	.688	12.00	.875	17.46
24X13X .688/.875T	94.79	280.2	319.9	3790.6	10.2	13.5	11.8	27.88	24.88	.688	13.00	.875	17.46
27X 8X .750/1.125T	98.19	284.8	336.0	3950.7	10.3	13.9	11.8	28.88	25.13	.750	11.00	1.125	17.63
27X11X .750/.875T	99.45	323.8	321.2	4616.4	11.1	14.3	14.4	29.25	28.13	.750	8.00	1.125	21.47
27X12X .750/1.125T	101.59	325.2	337.4	4699.9	11.1	14.5	13.9	29.88	27.88	.750	11.00	.875	21.29
27X 9X .750/1.125T	103.29	329.1	345.3	4824.7	11.1	14.7	14.0	30.38	28.13	.750	9.00	1.125	21.47
27X10X .750/1.125T	104.55	329.2	356.3	4855.9	11.1	14.8	13.6	30.75	27.88	.750	12.00	.875	21.29
27X11X .750/1.125T	107.10	334.0	369.2	5020.1	11.2	15.0	13.6	31.50	28.13	.750	10.00	1.125	21.47
27X 9X .875/1.375T	110.94	338.3	393.1	5205.5	11.2	15.4	13.2	32.63	28.13	.750	11.00	1.125	21.47
27X 10X .875/1.375T	122.40	356.3	402.6	5458.6	11.1	15.3	13.6	36.00	28.38	.875	9.00	1.375	25.27
30X10X .875/1.125T	136.00	415.6	491.4	7178.2	12.2	17.3	14.6	46.00	31.38	.875	10.00	1.375	27.98
30X13X .875/1.125T	138.99	417.2	515.8	7295.5	12.2	17.5	14.1	48.88	31.13	.875	13.00	1.125	27.68
30X14X .875/1.375T	140.69	421.5	541.8	7436.7	12.2	17.7	14.2	41.38	31.38	.875	11.00	1.375	27.98
30X14X .875/1.125T	142.80	421.5	541.8	7499.0	12.2	17.8	13.8	42.00	31.13	.875	14.00	1.125	27.68
30X14X .875/1.375T	154.70	435.3	617.1	8136.9	12.3	18.7	13.2	43.50	31.38	.875	14.00	1.375	27.98
33X10X1.000/1.500T	163.20	504.0	602.6	9606.1	13.0	19.1	15.9	48.88	34.50	1.000	10.00	1.500	35.88
33X11X1.000/1.375T	163.64	503.6	607.8	9605.5	13.0	19.1	15.8	48.13	34.38	1.000	11.00	1.375	34.88
36X13X1.000/1.125T	172.14	563.4	671.8	11530.2	14.0	20.5	17.2	50.63	37.13	1.000	13.00	1.125	37.63
33X13X1.000/1.375T	172.99	516.0	675.8	10205.7	13.1	19.8	15.1	50.88	34.38	1.000	13.00	1.375	34.88
36X11X1.000/1.375T	173.34	568.4	680.5	11731.4	14.0	20.6	17.2	51.13	37.38	1.000	11.00	1.375	37.88
36X10X1.000/1.750T	181.90	584.5	736.2	12461.8	14.2	21.3	16.9	53.50	37.75	1.000	10.00	1.750	38.25
33X16X1.000/1.375T	187.00	531.4	777.3	11088.7	13.2	20.7	14.2	55.00	34.38	1.000	16.00	1.375	34.88

0.5000 - 1/2 in.



.563 IN. PLATE (AREA= 10.76 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		***** BEAM DIMENSIONS *****		SHEAR AREA
3X 2X .125/ .100T	WT/FT	ZPL	ZFL INERTIA	R	VP	
4X 2X .125/ .100T	2.55	12.8	1.7	5.8	.7	1.29
3X 3X .125/ .100T	2.99	19.4	2.4	10.1	.9	1.28
4X 3X .125/ .100T	3.20	15.3	2.4	7.7	.8	1.29
5X 2X .100/ .250T	3.50	22.5	3.2	13.2	1.1	1.29
6X 2X .100/ .250T	4.69	24.4	3.8	15.9	1.1	1.29
7X 2X .100/ .250T	4.98	30.4	4.3	21.8	1.3	1.29
8X 2X .100/ .250T	5.10	19.4	3.7	12.2	1.0	1.29
9X 2X .100/ .250T	5.30	32.5	4.9	25.0	1.4	1.29
10X 2X .100/ .250T	5.95	41.2	6.2	37.0	1.7	1.29
11X 2X .100/ .250T	6.39	42.9	7.0	48.9	1.8	1.29
12X 2X .100/ .250T	6.60	36.9	6.9	33.6	1.6	1.29
13X 2X .100/ .250T	6.80	30.2	6.4	25.7	1.4	1.29
14X 2X .100/ .250T	7.00	45.4	8.1	47.2	1.9	1.29
15X 2X .100/ .250T	7.24	46.0	8.5	49.0	2.0	1.29
16X 2X .100/ .250T	7.45	39.3	8.2	39.6	1.7	1.29
17X 2X .100/ .250T	8.09	40.6	10.0	57.2	2.1	1.29
18X 2X .100/ .250T	8.50	41.5	9.8	46.4	1.9	1.29
19X 2X .100/ .250T	9.15	54.7	10.7	70.7	2.3	1.29
20X 2X .100/ .250T	9.55	49.6	11.0	63.0	2.2	1.29
21X 2X .100/ .250T	9.79	56.9	12.0	78.7	2.4	1.29
22X 2X .100/ .250T	10.00	63.7	12.8	94.7	2.6	1.29
23X 2X .100/ .250T	10.20	57.8	12.9	83.1	2.5	1.29
24X 2X .100/ .250T	10.40	50.8	13.2	86.5	2.5	1.29
25X 2X .100/ .250T	10.64	66.1	14.3	104.9	2.7	1.29
26X 2X .100/ .250T	10.85	72.8	15.0	122.9	3.0	1.29
27X 2X .100/ .250T	11.05	67.2	15.3	110.6	2.8	1.29
28X 2X .100/ .250T	11.25	60.3	15.1	95.1	2.6	1.29
29X 2X .100/ .250T	11.43	75.3	16.6	135.4	3.1	1.29
30X 2X .100/ .250T	11.90	76.5	17.8	142.5	3.2	1.29
31X 2X .100/ .250T	12.10	77.6	18.2	147.7	3.2	1.29
32X 2X .100/ .250T	12.10	69.9	17.8	125.7	3.0	1.29
33X 2X .100/ .250T	12.75	79.2	20.0	158.7	3.3	1.29
34X 2X .100/ .250T	12.95	79.5	20.6	161.5	3.3	1.29
35X 2X .100/ .250T	13.19	72.4	20.3	141.6	3.1	1.29
36X 2X .100/ .250T	13.40	64.7	19.4	119.6	2.9	1.29
37X 2X .100/ .250T	13.60	81.4	22.1	173.9	3.4	1.29
38X 2X .100/ .250T	14.04	82.1	23.3	180.5	3.5	1.29
39X 2X .100/ .250T	14.25	74.5	22.6	156.3	3.2	1.29
40X 2X .100/ .250T	14.45	74.6	23.2	158.3	3.2	1.29
41X 2X .100/ .250T	14.89	66.5	22.5	134.5	3.0	1.29
42X 2X .100/ .250T	15.10	84.4	26.0	199.1	3.6	1.29
43X 2X .100/ .250T	15.30	84.4	26.6	201.1	3.6	1.29
44X 2X .100/ .250T	15.74	88.6	24.6	210.4	3.7	1.29
45X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
46X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
47X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
48X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
49X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
50X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
51X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
52X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
53X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
54X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
55X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
56X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
57X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
58X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
59X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
60X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
61X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
62X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
63X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
64X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
65X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
66X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
67X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
68X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
69X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
70X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
71X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
72X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
73X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
74X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
75X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
76X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
77X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
78X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
79X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
80X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
81X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
82X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
83X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
84X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
85X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
86X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
87X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
88X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
89X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
90X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
91X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
92X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
93X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
94X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
95X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
96X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
97X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
98X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
99X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29
100X 2X .100/ .250T	15.74	76.6	26.1	175.2	3.4	1.29

0.5625 - 9/16 in.

-.563 IN. PLATE (AREA= 10.76 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			DIMENSIONS			BEAM			FLANGE			SHEAR
7X 7X	.250/	.438T	WT/FT	ZPL	ZFL	INERTIA	R	VP	YF	AREA	DEPTH	WEB THICK	MIDTH	THICK	AREA
7X 7X	.250/	.438T	16.35	68.1	25.5	148.7	3.1	2.2	5.8	4.81	7.44	.250	7.00	.438	2.00
10X 4X	.313/	.438T	16.59	91.0	26.9	228.6	3.8	2.5	8.5	4.88	10.44	.313	4.00	.438	3.44
9X 6X	.250/	.438T	16.59	86.7	29.9	222.4	3.8	2.6	7.4	4.88	9.44	.250	6.00	.438	2.58
10X 5X	.313/	.375T	17.00	91.8	28.3	236.4	3.9	2.6	8.4	5.00	10.38	.313	5.00	.375	3.43
8X 7X	.250/	.438T	17.20	78.3	29.5	193.1	3.5	2.5	6.5	5.06	8.44	.250	7.00	.438	2.25
10X 4X	.313/	.500T	17.44	93.1	29.3	246.7	3.9	2.6	8.4	5.13	10.50	.313	4.00	.500	3.46
9X 7X	.250/	.438T	18.05	88.6	33.8	244.4	3.9	2.8	7.2	5.31	9.44	.250	7.00	.438	2.50
10X 6X	.313/	.375T	18.29	94.3	31.9	268.7	4.0	2.8	8.2	5.38	10.38	.313	6.00	.375	3.43
10X 5X	.313/	.500T	19.14	96.3	34.1	278.8	4.1	2.9	8.2	5.63	10.50	.313	5.00	.500	3.46
10X 6X	.313/	.438T	19.55	96.7	35.4	285.1	4.2	2.9	8.1	5.75	10.44	.313	6.00	.438	3.44
10X 5X	.313/	.563T	20.20	98.2	37.1	299.4	4.2	3.0	8.1	5.94	10.56	.313	5.00	.563	3.48
10X 6X	.313/	.500T	20.84	98.8	39.0	309.3	4.3	3.1	7.9	6.13	10.50	.313	6.00	.500	3.46
10X 7X	.313/	.438T	21.05	98.7	39.7	311.3	4.3	3.2	7.9	6.19	10.44	.313	7.00	.438	3.44
9X 7X	.313/	.500T	21.45	90.3	38.8	272.9	4.0	3.0	7.0	6.31	9.50	.313	7.00	.500	3.15
12X 4X	.375/	.469T	21.69	111.9	37.9	369.3	4.6	3.3	9.7	6.38	12.47	.375	4.00	.469	4.89
10X 6X	.313/	.563T	22.10	100.6	42.5	332.4	4.4	3.3	7.8	6.50	10.56	.313	6.00	.563	3.48
10X 7X	.313/	.500T	22.54	100.0	43.8	337.8	4.4	3.4	7.7	6.63	10.50	.313	7.00	.500	3.46
12X 4X	.375/	.531T	22.54	114.1	40.7	393.0	4.8	3.4	9.6	6.63	12.53	.375	4.00	.531	4.91
9X 7X	.313/	.563T	22.95	92.1	42.6	294.6	4.1	3.2	8.9	6.75	9.56	.313	7.00	.563	3.17
9X 8X	.313/	.500T	23.15	91.9	43.2	295.6	4.1	3.2	6.8	6.81	9.50	.313	8.00	.500	3.15
12X 5X	.375/	.469T	23.26	115.5	43.3	410.7	4.8	3.6	9.5	6.84	12.47	.375	5.00	.469	4.89
12X 4X	.375/	.594T	23.39	116.3	43.5	416.4	4.9	3.6	9.6	6.88	12.59	.375	4.00	.594	4.93
10X 7X	.313/	.563T	24.00	102.6	47.9	363.1	4.5	3.5	7.6	7.06	10.56	.313	7.00	.563	3.48
10X 8X	.313/	.500T	24.24	102.6	48.7	365.3	4.5	3.6	7.5	7.13	10.50	.313	8.00	.500	3.46
12X 4X	.375/	.656T	24.24	118.1	46.1	438.8	5.0	3.7	9.5	7.13	12.66	.375	4.00	.656	4.96
9X 8X	.313/	.563T	24.85	93.5	47.4	318.5	4.2	3.4	6.7	7.31	9.56	.313	8.00	.563	3.17
12X 6X	.375/	.469T	24.85	118.5	48.7	449.6	5.0	3.8	9.2	7.31	12.47	.375	6.00	.469	4.89
12X 5X	.375/	.594T	25.40	119.9	50.2	465.2	5.1	3.9	9.3	7.47	12.59	.375	5.00	.594	4.93
10X 8X	.313/	.563T	25.94	104.3	53.4	393.0	4.6	3.8	7.4	7.63	10.56	.313	8.00	.563	3.48
12X 5X	.375/	.656T	26.45	121.9	53.6	492.1	5.2	4.0	9.2	7.78	12.66	.375	5.00	.656	4.96
12X 6X	.375/	.594T	26.45	121.0	54.0	486.6	5.1	4.0	9.0	7.78	12.47	.375	6.00	.469	4.89
12X 7X	.375/	.531T	27.40	122.9	56.9	511.5	5.2	4.2	9.0	8.06	12.59	.375	7.00	.594	4.93
12X 7X	.375/	.531T	27.95	123.3	58.9	522.0	5.2	4.2	8.9	8.22	12.53	.375	7.00	.531	4.91
12X 6X	.375/	.656T	28.70	124.8	61.0	541.5	5.3	4.3	8.9	8.44	12.66	.375	6.00	.656	4.96
12X 7X	.375/	.594T	29.44	125.3	63.6	555.2	5.3	4.4	8.7	8.66	12.59	.375	7.00	.594	4.93
12X 8X	.375/	.531T	29.75	125.4	64.8	559.4	5.4	4.5	8.6	8.75	12.53	.375	8.00	.531	4.91
14X 5X	.438/	.531T	29.85	139.3	60.0	632.8	5.7	4.5	10.6	8.78	14.53	.438	5.00	.531	6.61
14X 5X	.438/	.594T	30.91	141.7	63.8	666.8	5.8	4.7	10.4	9.09	14.59	.438	5.00	.594	6.64
12X 8X	.375/	.594T	31.45	127.4	70.3	536.0	5.5	4.7	8.5	9.25	12.59	.375	8.00	.594	4.93
12X 9X	.375/	.531T	31.55	127.2	70.9	596.1	5.5	4.7	8.4	9.31	14.53	.375	9.00	.531	4.91
14X 6X	.438/	.531T	31.65	142.0	66.9	687.6	5.9	4.8	10.3	9.31	14.53	.438	6.00	.531	6.61
14X 5X	.438/	.656T	31.99	143.9	67.8	701.3	5.9	4.9	10.3	9.41	16.66	.438	5.00	.656	6.67
16X 5X	.438/	.531T	32.84	160.8	71.7	847.9	6.4	5.3	11.8	9.66	16.53	.438	5.00	.531	7.49
14X 6X	.438/	.594T	32.95	145.2	71.5	726.2	6.0	5.0	10.2	9.69	14.59	.438	6.00	.594	6.64
14X 5X	.438/	.719T	33.05	146.0	71.6	733.9	6.0	5.0	10.3	9.72	14.72	.438	5.00	.719	6.69

0.5625 - 9/16 in.



.563 IN. PLATE (AREA= 10.76 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA					WEB THICK	FLANGE WIDTH THICK	
12X 8X .375/ .656T	33.15	129.2	75.8	631.8	5.6	4.9	8.3	9.75	.375	8.00	.656
14X 7X .438/ .531T	33.46	145.8	73.8	732.7	6.0	5.1	10.0	9.84	.438	7.00	.531
16X 5X .438/ .594T	33.90	163.5	76.2	891.3	6.6	5.5	11.7	9.97	.438	5.00	.594
14X 6X .438/ .656T	34.20	147.5	76.2	764.9	6.1	5.2	10.0	10.06	.438	6.00	.656
16X 6X .438/ .531T	34.65	164.8	79.7	917.9	6.6	5.6	11.5	10.19	.438	6.00	.531
16X 5X .438/ .656T	34.95	166.0	80.6	934.0	6.7	5.6	11.6	10.28	.438	5.00	.656
14X 7X .438/ .594T	34.95	148.2	79.3	782.6	6.1	5.3	9.9	10.28	.438	7.00	.594
14X 8X .438/ .531T	35.29	148.3	80.8	789.1	6.1	5.3	9.8	10.38	.438	8.00	.531
16X 6X .438/ .594T	35.90	167.5	84.9	966.7	6.7	5.8	11.4	10.56	.438	6.00	.594
16X 5X .438/ .531T	36.01	168.3	85.0	975.7	6.8	5.8	11.5	10.59	.438	5.00	.719
16X 7X .438/ .531T	36.45	168.2	87.4	983.4	6.8	5.8	11.2	10.72	.438	7.00	.531
16X 8X .438/ .594T	36.99	150.7	87.0	836.0	6.2	5.5	9.6	10.88	.438	8.00	.594
14X 9X .438/ .531T	37.09	150.6	97.7	836.1	6.2	5.6	9.5	10.91	.438	9.00	.531
16X 7X .438/ .594T	37.94	170.9	93.6	1037.6	6.9	6.1	11.1	11.16	.438	7.00	.594
16X 8X .438/ .531T	38.25	171.1	95.2	1045.2	6.9	6.1	11.0	11.25	.438	8.00	.531
16X 6X .438/ .719T	38.45	172.4	95.5	1061.8	6.9	6.2	11.1	11.31	.438	6.00	.719
16X 7X .438/ .656T	39.41	173.4	99.7	1090.5	7.0	6.3	10.9	11.59	.438	7.00	.656
16X 8X .438/ .594T	39.95	173.8	102.3	1104.4	7.0	6.4	10.8	11.75	.438	8.00	.594
16X 9X .438/ .531T	40.05	173.6	102.9	1104.5	7.0	6.4	10.7	11.78	.438	9.00	.531
16X 7X .438/ .719T	40.90	175.8	106.0	1142.6	7.1	6.5	10.8	12.03	.438	7.00	.719
16X 8X .438/ .656T	41.65	176.4	109.3	1162.4	7.1	6.6	10.6	12.25	.438	8.00	.656
18X 5X .500/ .656T	41.75	190.3	98.5	1247.2	7.4	6.6	12.7	12.28	.500	5.00	.656
16X 9X .438/ .594T	41.96	176.4	111.0	1168.3	7.1	6.6	10.5	12.34	.438	9.00	.594
16X 5X .500/ .875T	42.09	174.8	99.0	1102.5	6.9	6.3	11.1	12.38	.500	5.00	.875
18X 6X .500/ .594T	42.70	192.1	103.4	1287.5	7.4	6.7	12.4	12.56	.500	6.00	.594
18X 5X .500/ .719T	42.81	192.8	103.3	1297.8	7.5	6.7	12.6	12.59	.500	5.00	.719
14X10X .438/ .656T	43.15	156.9	110.0	984.3	6.5	6.3	8.9	12.69	.438	10.00	.656
16X 8X .438/ .719T	43.35	178.6	116.4	1217.9	7.2	6.8	10.5	12.75	.438	8.00	.719
16X 9X .438/ .656T	43.89	178.8	118.9	1229.9	7.2	6.9	10.3	12.91	.438	9.00	.656
18X 6X .500/ .656T	44.00	194.9	109.1	1344.9	7.5	6.9	12.3	12.94	.500	6.00	.656
16X10X .438/ .594T	44.00	178.7	119.8	1229.8	7.2	6.9	10.3	12.94	.438	10.00	.594
14X11X .438/ .656T	45.36	158.5	118.3	1034.0	6.5	6.5	8.7	13.34	.438	11.00	.656
16X 9X .438/ .719T	45.80	181.2	126.9	1289.9	7.3	7.1	10.2	13.47	.438	9.00	.719
16X10X .438/ .656T	46.10	181.1	128.4	1294.0	7.3	7.1	10.1	13.56	.438	10.00	.656
18X 7X .500/ .719T	47.70	201.6	126.6	1499.2	7.8	7.4	11.8	14.03	.500	7.00	.719
18X 6X .500/ .875T	48.45	203.5	129.3	1537.3	7.8	7.6	11.9	14.25	.500	6.00	.875
18X 8X .500/ .719T	50.15	205.1	138.1	1591.1	7.9	7.8	11.5	14.75	.500	8.00	.719
18X 9X .500/ .656T	50.69	205.4	140.9	1606.6	7.9	7.8	11.4	14.91	.500	9.00	.656
18X10X .500/ .594T	50.80	205.2	141.9	1606.6	7.9	7.8	11.3	14.94	.500	10.00	.594
18X 7X .500/ .875T	51.44	207.5	143.2	1677.4	8.0	7.9	11.5	15.13	.500	7.00	.875
18X 9X .500/ .719T	52.60	208.1	149.5	1677.4	8.0	8.1	11.2	15.47	.500	9.00	.719
18X10X .500/ .656T	52.90	208.1	151.3	1683.9	8.0	8.1	11.1	15.56	.500	10.00	.656
18X 8X .500/ .656T	54.40	211.0	157.2	1751.4	8.1	8.3	11.1	16.00	.500	8.00	.656
18X11X .500/ .594T	55.15	210.5	161.9	1758.9	8.1	8.4	10.9	16.22	.500	11.00	.594
18X11X .500/ .719T	57.49	213.1	172.7	1839.4	8.2	8.6	10.7	16.91	.500	11.00	.719

0.5625 - 9/16 in.

563 IN. PLATE (AREA= 10.76 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL								WIDTH	THICK	
18X12X .500/ .719I	59.94	215.2	184.1	1913.1	9.2	8.9	10.4	17.63	18.72	.500	12.00	.719	9.64
18X10X .500/ .875I	60.35	216.5	184.9	1939.0	8.2	9.0	10.5	17.75	18.88	.500	18.00	.875	9.72
21X 8X .625/ .875I	68.44	257.5	199.1	2519.0	9.0	9.8	12.7	20.13	21.88	.625	8.00	.875	14.03
21X10X .625/ .750I	70.14	259.1	209.1	2581.0	9.1	10.0	12.3	20.63	21.75	.625	10.00	.750	13.95
21X 9X .625/ .875I	71.40	261.5	214.9	2647.2	9.1	10.1	12.3	21.00	21.88	.625	9.00	.875	14.03
21X11X .625/ .750I	72.69	262.3	222.8	2688.3	9.1	10.2	12.1	21.38	21.75	.625	11.00	.750	13.95
21X10X .625/ .875I	74.39	265.1	230.8	2769.0	9.2	10.4	12.0	21.88	21.88	.625	10.00	.875	14.03
21X 9X .625/1.125I	79.05	271.6	253.2	2973.3	9.4	10.9	11.7	23.25	22.13	.625	9.00	1.125	14.18
21X12X .625/ .875I	80.34	271.1	261.9	2989.6	9.3	11.0	11.4	23.63	21.88	.625	12.00	.875	14.03
21X 9X .688/ .875I	82.89	310.6	268.0	3680.8	10.1	11.6	13.9	24.38	24.88	.688	9.00	.875	17.58
21X13X .625/ .875I	83.30	273.6	277.7	3093.0	9.4	11.3	11.1	24.50	21.88	.625	13.00	.875	14.03
21X10X .688/ .875I	85.85	315.0	277.5	3754.0	10.2	11.9	13.5	25.25	24.88	.688	10.00	.875	17.50
21X14X .625/ .875I	86.29	276.0	293.2	3190.4	9.4	11.6	10.9	25.38	21.88	.625	14.00	.875	14.03
21X 8X .688/1.125I	86.78	317.5	288.1	3825.2	10.3	12.0	13.7	25.50	25.13	.688	8.00	1.125	17.68
21X11X .688/ .875I	88.84	319.0	295.1	3899.6	10.3	12.2	13.2	26.13	24.88	.688	11.00	.875	17.50
21X 9X .688/1.125I	90.54	322.0	302.7	4014.0	10.4	12.4	13.3	26.63	25.13	.688	9.00	1.125	17.68
21X12X .688/ .875I	91.88	322.6	312.8	4040.6	10.3	12.5	12.9	27.00	24.88	.688	12.00	.875	17.50
21X13X .688/ .875I	94.79	325.9	330.4	4174.3	10.4	12.8	12.6	27.88	24.88	.688	13.00	.875	17.50
21X11X .688/1.125I	98.19	331.2	347.2	4354.4	10.5	13.1	12.5	28.88	25.13	.688	11.00	1.125	17.68
21X 8X .750/1.125I	99.45	373.0	332.5	5043.5	11.2	13.5	15.2	29.25	28.13	.750	8.00	1.125	21.52
21X11X .750/ .875I	101.59	374.7	349.8	5139.0	11.2	13.7	14.7	29.88	27.88	.750	11.00	.875	21.33
21X 9X .750/1.125I	103.29	379.0	357.3	5277.0	11.3	13.9	14.8	30.38	28.13	.750	9.00	1.125	21.52
21X12X .750/ .875I	104.55	379.1	368.4	5314.2	11.3	14.0	14.4	30.75	27.88	.750	12.00	.875	21.33
21X10X .750/1.125I	107.10	384.5	381.8	5596.5	11.4	14.3	14.4	31.50	28.13	.750	10.00	1.125	21.52
21X11X .750/1.125I	110.94	389.4	406.4	5705.6	11.5	14.7	14.0	32.63	28.13	.750	11.00	1.125	21.52
21X 9X .875/1.375I	122.40	406.6	416.7	5956.5	11.3	14.6	14.3	36.00	28.38	.875	9.00	1.375	25.32
31X10X .875/1.375I	136.00	471.6	508.4	7814.4	12.4	16.6	15.4	40.00	31.38	.875	10.00	1.375	27.95
31X13X .875/1.125I	138.99	473.4	533.3	7948.1	12.4	16.8	14.9	40.88	31.13	.875	13.00	1.125	27.73
31X11X .875/1.375I	140.69	477.8	540.7	8102.3	12.5	17.0	15.0	41.38	31.38	.875	11.00	1.375	27.95
31X14X .875/1.125I	142.80	478.2	560.1	8175.3	12.4	17.1	14.6	42.00	31.13	.875	14.00	1.125	27.73
31X10X .875/1.375I	154.70	493.4	637.8	8886.2	12.6	18.0	13.9	45.50	31.38	.875	14.00	1.375	27.95
31X10X1.000/1.500I	163.20	564.7	623.1	10386.4	13.3	18.4	16.7	48.00	34.50	1.000	10.00	1.500	35.86
31X11X1.000/1.375I	163.64	564.2	628.3	10387.3	13.3	18.4	16.5	48.13	34.38	1.000	11.00	1.375	34.94
31X13X1.000/1.125I	172.14	628.5	694.0	12432.2	14.2	19.0	17.9	50.63	37.13	1.000	13.00	1.125	37.69
31X13X1.000/1.375I	172.99	577.8	698.2	11047.9	13.4	19.1	15.8	50.88	34.38	1.000	13.00	1.375	34.94
31X11X1.000/1.375I	173.84	633.9	703.2	12649.2	14.3	20.0	18.0	51.13	37.38	1.000	11.00	1.375	37.94
31X10X1.000/1.750I	181.90	651.3	760.6	13442.9	14.5	20.6	17.7	53.50	37.75	1.000	10.00	1.750	38.31
31X16X1.000/1.375I	187.00	594.6	802.6	11935.4	13.5	20.1	14.9	55.00	34.38	1.000	16.00	1.375	34.94

0.5625 - 9/16 in.



.625 IN. PLATE (AREA= 13.20 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	VP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	THICK	
3X 2X .125/.100T	2.55	13.4	1.8	6.1	.7	.5	3.4	.75	3.19	.125	2.00	.100	.48
4X 2X .125/.100T	2.99	20.6	2.5	10.5	.9	.5	4.3	.88	4.19	.125	2.00	.100	.60
3X 3X .125/.100T	3.20	16.3	2.4	8.1	.8	.5	3.3	.94	3.19	.125	3.00	.100	.48
4X 3X .125/.100T	3.60	24.3	3.2	13.7	1.0	.6	4.2	1.06	4.19	.125	3.00	.100	.60
4X 2X .188/.313T	4.69	26.6	3.8	16.6	1.1	.6	4.3	1.38	4.31	.188	2.00	.313	.93
5X 2X .188/.250T	4.90	33.5	4.4	22.6	1.2	.7	5.2	1.44	5.25	.188	2.00	.250	1.10
3X 3X .188/.313T	5.10	21.3	3.8	12.8	.9	.6	3.3	1.50	3.31	.188	3.00	.313	.74
5X 2X .188/.313T	5.30	36.1	5.8	26.0	1.3	.7	5.2	1.56	5.31	.188	2.00	.313	1.12
6X 2X .188/.313T	5.95	46.2	6.3	38.3	1.6	.8	6.1	1.75	6.31	.188	2.00	.313	1.30
6X 3X .188/.250T	6.39	48.4	7.1	42.5	1.7	.9	6.0	1.88	6.25	.188	3.00	.250	1.29
5X 4X .188/.250T	6.60	41.6	7.0	35.1	1.5	.8	5.0	1.94	5.25	.188	4.00	.250	1.10
4X 4X .188/.250T	6.80	34.0	6.5	26.9	1.3	.8	4.1	2.00	4.31	.188	4.00	.313	.93
6X 3X .188/.313T	7.00	51.7	8.2	49.0	1.8	.9	6.0	2.06	6.31	.188	3.00	.313	1.30
6X 4X .188/.250T	7.24	52.4	8.6	51.0	1.8	1.0	5.9	2.13	6.25	.188	4.00	.250	1.29
5X 4X .188/.313T	7.45	44.7	8.3	41.4	1.6	.9	5.0	2.19	5.31	.188	4.00	.313	1.12
6X 4X .188/.313T	8.03	55.8	10.2	59.6	2.0	1.1	5.9	2.38	6.31	.188	4.00	.313	1.30
5X 5X .188/.313T	8.50	47.6	9.9	48.6	1.8	1.0	4.9	2.50	5.31	.188	5.00	.313	1.12
7X 3X .250/.313T	9.15	63.0	10.9	73.7	2.1	1.2	6.8	2.69	7.31	.250	3.00	.313	1.98
6X 3X .250/.438T	9.55	57.2	11.2	65.9	2.0	1.2	5.9	2.81	6.44	.250	3.00	.438	1.77
7X 3X .250/.375T	9.79	65.9	12.2	82.2	2.3	1.2	6.8	2.88	7.38	.250	3.00	.375	2.00
8X 3X .250/.313T	10.00	74.0	13.0	98.8	2.5	1.3	7.6	2.94	8.31	.250	3.00	.313	2.23
7X 4X .250/.313T	10.20	67.1	13.1	86.9	2.3	1.3	6.6	3.00	7.31	.250	4.00	.313	1.98
7X 3X .250/.438T	10.40	68.4	13.4	90.5	2.4	1.3	6.7	3.06	7.44	.250	3.00	.438	2.02
8X 3X .250/.375T	10.64	77.0	14.5	109.6	2.6	1.4	7.6	3.13	8.38	.250	3.00	.375	2.25
9X 3X .250/.313T	10.85	84.9	15.2	128.2	2.8	1.5	8.4	3.19	9.31	.250	3.00	.313	2.48
8X 4X .250/.313T	11.05	78.5	15.5	115.7	2.6	1.5	7.5	3.25	8.31	.250	4.00	.313	2.23
7X 5X .250/.313T	11.25	70.4	15.3	99.7	2.5	1.4	6.5	3.31	7.31	.250	5.00	.313	1.98
8X 3X .250/.438T	11.25	79.7	15.9	120.1	2.7	1.5	7.6	3.31	8.44	.250	3.00	.438	2.27
9X 3X .250/.375T	11.49	88.2	16.9	141.5	2.9	1.6	8.4	3.38	9.38	.250	3.00	.375	2.50
9X 4X .250/.313T	11.90	89.7	18.0	149.1	3.0	1.7	8.3	3.50	9.31	.250	4.00	.313	2.48
9X 3X .250/.438T	12.10	91.1	18.5	154.7	3.0	1.7	8.4	3.56	9.44	.250	3.00	.438	2.52
8X 5X .250/.313T	12.10	81.9	18.0	131.8	2.8	1.6	7.3	3.56	8.31	.250	5.00	.313	2.23
9X 4X .250/.375T	12.75	93.2	20.2	166.4	3.1	1.8	8.2	3.75	9.38	.250	4.00	.375	2.50
9X 5X .250/.313T	12.95	93.6	20.9	169.4	3.1	1.8	8.1	3.81	9.31	.250	5.00	.313	2.48
8X 5X .250/.375T	13.19	85.3	20.5	148.9	2.9	1.7	7.3	3.88	8.38	.250	5.00	.375	2.25
7X 5X .250/.438T	13.40	76.1	19.7	126.2	2.7	1.7	6.4	3.94	7.44	.250	5.00	.438	2.82
9X 4X .250/.438T	13.60	96.0	22.4	182.7	3.3	1.9	8.2	4.00	9.44	.250	4.00	.438	2.52
9X 5X .250/.375T	14.04	97.0	23.6	190.0	3.3	2.0	8.0	4.13	9.38	.250	5.00	.375	2.50
8X 5X .250/.438T	14.25	87.9	22.9	164.8	3.1	1.9	7.2	4.19	8.44	.250	5.00	.438	2.27
8X 6X .250/.375T	14.45	88.1	23.5	167.1	3.1	1.9	7.1	4.25	8.38	.250	6.00	.375	2.25
7X 6X .250/.438T	14.89	78.6	22.8	142.4	2.8	1.8	6.3	4.38	7.44	.250	6.00	.438	2.02
9X 5X .250/.438T	15.10	99.9	26.4	210.1	3.4	2.1	8.0	4.44	9.44	.250	5.00	.438	2.52
9X 6X .250/.375T	15.30	100.0	26.9	212.3	3.5	2.1	7.9	4.50	9.38	.250	6.00	.375	2.50
10X 4X .313/.375T	15.74	104.5	24.9	221.6	3.5	2.1	8.9	4.63	10.38	.313	4.00	.375	3.44
8X 6X .250/.438T	15.74	90.7	26.4	185.6	3.2	2.0	7.0	4.63	8.44	.250	6.00	.438	2.27

0.6250 - 5/8 in.

.625 IN. PLATE (AREA= 13.28 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				BEAM DIMENSIONS				FLANGE		SHEAR		
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
7X 7X	.250/.438T	16.35	80.8	25.9	158.0	3.0	2.0	6.1	4.81	7.44	.250	7.00	.438	2.82
10X 4X	.313/.438T	16.59	107.5	27.3	241.1	3.6	2.2	8.8	4.88	10.44	.313	4.00	.438	3.46
9X 6X	.250/.438T	16.59	102.9	30.3	235.6	3.6	2.3	7.8	4.88	9.44	.250	6.00	.438	2.52
10X 5X	.313/.375T	17.00	108.6	28.7	249.6	3.7	2.3	8.7	5.00	10.38	.313	5.00	.375	3.44
8X 7X	.250/.438T	17.20	93.0	29.9	205.2	3.3	2.2	6.9	5.06	8.44	.250	7.00	.438	2.27
10X 4X	.313/.500T	17.44	110.3	29.8	260.7	3.8	2.4	8.8	5.13	10.50	.313	4.00	.500	3.48
9X 7X	.250/.438T	18.05	105.4	34.2	259.8	3.7	2.5	7.6	5.31	9.44	.250	7.00	.438	2.52
10X 6X	.313/.375T	18.29	111.8	32.3	276.1	3.8	2.5	8.5	5.38	10.38	.313	6.00	.375	3.44
10X 5X	.313/.500T	19.14	114.3	34.6	295.8	4.0	2.6	8.5	5.63	10.50	.313	5.00	.500	3.48
10X 6X	.313/.438T	19.55	114.8	35.9	302.8	4.0	2.6	8.4	5.75	10.44	.313	6.00	.438	3.46
10X 5X	.313/.563T	20.20	116.7	37.6	318.3	4.1	2.7	8.5	5.94	10.56	.313	5.00	.563	3.50
10X 6X	.313/.500T	20.84	117.5	39.6	329.3	4.1	2.8	8.3	6.13	10.50	.313	6.00	.500	3.48
10X 7X	.313/.438T	21.05	117.5	40.2	331.6	4.1	2.8	8.2	6.19	10.44	.313	7.00	.438	3.46
9X 7X	.313/.500T	21.45	107.6	39.3	291.6	3.9	2.7	7.4	6.31	9.58	.313	7.00	.500	3.17
12X 4X	.375/.469T	21.69	132.6	38.6	391.7	4.5	3.0	10.1	6.38	12.47	.375	4.00	.469	4.91
10X 6X	.313/.563T	22.10	119.9	43.1	354.8	4.2	3.0	8.2	6.50	10.56	.313	6.00	.563	3.50
10X 7X	.313/.500T	22.54	120.2	44.4	360.9	4.3	3.0	8.1	6.63	10.50	.313	7.00	.500	3.48
12X 4X	.375/.531T	22.54	135.4	41.4	417.4	4.6	3.1	10.1	6.63	12.53	.375	4.00	.531	4.93
9X 7X	.313/.563T	22.95	109.8	43.2	315.7	4.0	2.9	7.3	6.75	9.56	.313	7.00	.563	3.19
9X 8X	.313/.500T	23.15	109.7	43.8	316.9	4.0	2.9	7.2	6.81	9.50	.313	8.00	.500	3.17
12X 5X	.375/.469T	23.26	137.1	44.1	436.9	4.7	3.2	9.9	6.84	12.47	.375	5.00	.469	4.91
12X 4X	.375/.594T	23.39	138.0	44.3	443.3	4.7	3.2	10.0	6.88	12.59	.375	4.00	.594	4.96
10X 7X	.313/.563T	24.00	122.5	48.6	389.1	4.4	3.2	8.0	7.06	10.56	.313	7.00	.563	3.50
10X 8X	.313/.500T	24.24	122.4	49.4	391.7	4.4	3.2	7.9	7.13	10.50	.313	8.00	.500	3.48
12X 4X	.375/.656T	24.24	140.3	47.0	467.5	4.8	3.3	10.0	7.13	12.66	.375	4.00	.656	4.98
9X 8X	.313/.563T	24.85	111.8	48.1	342.5	4.1	3.1	7.1	7.31	9.56	.313	8.00	.563	3.19
12X 6X	.375/.469T	24.85	140.8	49.5	479.6	4.8	3.4	9.7	7.31	12.47	.375	6.00	.469	4.91
12X 5X	.375/.594T	25.40	142.5	51.0	496.7	4.9	3.5	9.7	7.47	12.59	.375	5.00	.594	4.96
10X 8X	.313/.563T	25.94	124.7	54.2	422.6	4.5	3.4	7.8	7.63	10.56	.313	8.00	.563	3.50
12X 5X	.375/.656T	26.45	145.0	54.5	526.4	5.0	3.6	9.7	7.78	12.66	.375	5.00	.656	4.98
12X 7X	.375/.469T	26.45	144.0	54.9	520.6	5.0	3.6	9.5	7.78	12.47	.375	7.00	.469	4.91
12X 6X	.375/.594T	26.45	146.3	57.9	548.0	5.1	3.7	9.5	8.06	12.59	.375	6.00	.594	4.96
12X 7X	.375/.531T	27.40	146.9	59.9	559.8	5.1	3.8	9.3	8.22	12.53	.375	7.00	.531	4.93
12X 6X	.375/.656T	28.70	148.6	62.0	581.4	5.2	3.9	9.4	8.44	12.66	.375	6.00	.656	4.98
12X 7X	.375/.594T	29.44	149.3	64.7	596.8	5.2	4.0	9.2	8.66	12.59	.375	7.00	.594	4.96
12X 8X	.375/.531T	29.75	149.4	65.9	601.7	5.2	4.0	9.1	8.75	12.53	.375	8.00	.531	4.93
14X 5X	.438/.531T	29.85	165.1	61.2	676.6	5.5	4.1	11.1	8.78	14.53	.438	5.00	.531	6.64
14X 5X	.438/.594T	30.91	168.0	65.1	714.0	5.6	4.3	11.0	9.09	14.59	.438	5.00	.594	6.66
12X 8X	.375/.594T	31.45	151.9	71.5	642.7	5.3	4.2	9.0	9.25	12.59	.375	8.00	.594	4.96
12X 9X	.375/.531T	31.55	151.7	72.1	643.0	5.3	4.2	8.9	9.28	12.53	.375	9.00	.531	4.93
14X 6X	.438/.531T	31.65	169.4	68.2	737.2	5.7	4.4	10.8	9.31	14.53	.438	6.00	.531	6.64
14X 5X	.438/.656T	31.99	170.7	69.1	752.1	5.8	4.4	10.9	9.41	14.66	.438	5.00	.656	6.69
16X 5X	.438/.531T	32.84	190.4	73.3	907.7	6.3	4.8	12.4	9.66	16.53	.438	5.00	.531	7.51
14X 6X	.438/.594T	32.95	172.3	73.0	779.9	5.8	4.5	10.7	9.69	14.59	.438	6.00	.594	6.66
14X 5X	.438/.719T	33.05	173.2	73.0	788.2	5.9	4.6	10.8	9.72	14.72	.438	5.00	.719	6.72

0.6250 - 5/8 in.



.625 IN. PLATE (AREA= 13.28 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			DIMENSIONS *****			BEAM		FLANGE		SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WEB	WIDTH	THICK	AREA	
12X 8X .375/.656T	154.3	77.1	683.1	5.4	4.4	8.9	9.75	12.66	.375	.656	8.00	.656	4.98	
14X 7X .438/.531T	173.0	75.3	795.0	5.9	4.6	10.6	9.84	14.53	.438	.531	7.00	.531	6.64	
16X 5X .438/.594T	193.6	77.8	955.4	6.4	4.9	12.3	9.97	16.59	.438	.594	5.00	.594	7.54	
14X 6X .438/.656T	175.0	77.7	822.8	5.9	4.7	10.6	10.06	14.66	.438	.656	6.00	.656	6.69	
16X 6X .438/.531T	195.2	81.3	984.9	6.5	5.0	12.1	10.19	16.53	.438	.531	6.00	.531	7.51	
16X 5X .438/.656T	196.6	82.3	1002.5	6.5	5.1	12.2	10.28	16.66	.438	.656	5.00	.656	7.57	
14X 7X .438/.594T	175.9	80.8	842.7	6.0	4.8	10.4	10.28	14.59	.438	.594	7.00	.594	6.66	
14X 8X .438/.531T	176.1	82.3	850.3	6.0	4.8	10.3	10.38	14.53	.438	.531	8.00	.531	6.64	
16X 6X .438/.594T	198.5	86.7	1038.9	6.6	5.2	12.0	10.56	16.59	.438	.600	.594	.594	7.54	
16X 5X .438/.719T	199.4	86.8	1048.7	6.6	5.3	12.1	10.59	16.72	.438	.700	.719	.719	7.60	
16X 7X .438/.531T	199.3	89.3	1057.6	6.6	5.3	11.8	10.72	16.53	.438	.700	.531	.531	7.51	
14X 8X .438/.594T	179.0	88.7	902.7	6.1	5.0	10.2	10.88	14.59	.438	.800	.594	.594	6.66	
14X 9X .438/.531T	178.8	89.4	903.0	6.1	5.0	10.1	10.91	14.53	.438	.800	.531	.531	6.64	
16X 7X .438/.594T	202.6	95.6	1117.9	6.8	5.5	11.7	11.16	16.59	.438	.700	.594	.594	7.54	
16X 8X .438/.531T	202.8	97.1	1126.6	6.8	5.6	11.6	11.25	16.53	.438	.800	.531	.531	7.51	
16X 6X .438/.719T	204.3	97.5	1144.6	6.8	5.6	11.7	11.31	16.72	.438	.800	.719	.719	7.60	
16X 7X .438/.656T	205.6	101.8	1176.9	6.9	5.7	11.6	11.59	16.66	.438	.700	.656	.656	7.57	
16X 8X .438/.594T	206.1	104.4	1192.7	6.9	5.8	11.4	11.75	16.59	.438	.800	.594	.594	7.54	
16X 9X .438/.531T	205.9	105.0	1193.0	6.9	5.8	11.4	11.78	16.53	.438	.900	.531	.531	7.51	
16X 7X .438/.719T	208.4	108.2	1235.3	7.0	5.9	11.4	12.03	16.72	.438	.700	.719	.719	7.60	
16X 8X .438/.656T	209.1	111.6	1257.8	7.0	6.0	11.3	12.25	16.66	.438	.800	.656	.656	7.57	
16X 5X .500/.656T	224.3	100.9	1341.6	7.2	6.0	13.3	12.28	18.66	.500	.500	5.00	.656	9.64	
16X 9X .438/.594T	209.2	113.2	1264.7	7.0	6.0	11.2	12.34	16.59	.438	.900	.594	.594	7.54	
16X 5X .500/.875T	206.5	101.3	1189.8	6.8	5.8	11.7	12.38	16.88	.500	.500	5.00	.875	8.75	
16X 6X .500/.594T	226.5	105.9	1386.3	7.3	6.1	13.1	12.56	18.59	.500	.600	.594	.594	9.61	
16X 5X .500/.719T	227.3	105.8	1396.5	7.3	6.1	13.2	12.59	18.72	.500	.500	5.00	.719	9.67	
16X10X .438/.656T	186.6	112.1	1070.8	6.4	5.7	9.5	12.69	14.66	.438	.656	10.00	.656	6.69	
16X 8X .438/.719T	211.9	118.8	1320.3	7.1	6.2	11.1	12.75	16.72	.438	.800	.719	.719	7.60	
16X 9X .438/.656T	212.2	121.3	1334.2	7.1	6.3	11.0	12.91	16.66	.438	.900	.656	.656	7.57	
16X 6X .500/.656T	229.8	111.7	1449.9	7.4	6.3	13.0	12.94	18.66	.500	.600	.656	.656	9.64	
16X10X .438/.594T	212.0	122.2	1334.3	7.1	6.3	10.9	12.94	16.59	.438	.800	.594	.594	7.54	
16X11X .438/.656T	188.6	120.6	1124.3	6.5	6.0	9.3	13.34	14.66	.438	.656	11.00	.656	6.69	
16X 9X .438/.719T	215.8	129.6	1402.1	7.2	6.5	10.8	13.47	16.72	.438	.900	.719	.719	7.60	
16X10X .438/.656T	214.9	131.0	1407.1	7.2	6.5	10.7	13.56	16.66	.438	.800	.656	.656	7.57	
16X 7X .500/.719T	237.7	129.5	1622.0	7.7	6.8	12.5	14.03	18.72	.500	.700	.719	.719	9.67	
16X 6X .500/.875T	240.0	132.4	1664.1	7.8	6.9	12.6	14.25	18.88	.500	.600	.875	.875	9.75	
16X 8X .500/.719T	241.9	141.3	1725.3	7.8	7.1	12.2	14.75	18.72	.500	.800	.719	.719	9.67	
16X 9X .500/.656T	242.3	144.2	1743.3	7.9	7.2	12.1	14.91	18.66	.500	.900	.656	.656	9.64	
16X10X .500/.594T	242.1	145.1	1743.3	7.9	7.2	12.0	14.94	18.59	.500	.800	.594	.594	9.61	
16X 7X .500/.875T	244.8	146.6	1788.2	7.9	7.3	12.2	15.13	18.88	.500	.700	.875	.875	9.75	
16X 9X .500/.719T	245.4	152.8	1822.8	8.0	7.4	11.9	15.47	18.72	.500	.900	.719	.719	9.67	
16X10X .500/.656T	245.5	154.8	1830.5	8.0	7.5	11.8	15.56	18.66	.500	.800	.656	.656	9.64	
16X 8X .500/.875T	248.9	160.9	1905.9	8.1	7.7	11.6	16.00	18.88	.500	.800	.875	.875	9.75	
16X11X .500/.656T	248.3	165.6	1915.7	8.1	7.7	11.6	16.22	18.66	.500	.900	.656	.656	9.64	
16X11X .500/.719T	251.5	176.6	2007.1	8.2	8.0	11.4	16.91	18.72	.500	.800	.719	.719	9.67	

0.6250 - 5/8 in.

.625 IN. PLATE (AREA= 13.28 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YF	AREA	***** BEAM DIMENSIONS *****			SHEAR AREA	
		ZPL	ZFL				DEPTH	WEB THICK	FLANGE WIDTH		THICK
18X12X .500/.719F	59.94	254.0	188.3	8.2	0.2	11.1	17.63	.500	12.00	.719	9.67
18X10X .500/.875F	60.35	255.5	189.2	8.3	0.3	11.2	17.75	.500	10.00	.875	9.75
21X 8X .625/.875F	68.44	300.3	204.5	9.1	9.1	13.4	20.13	.625	8.00	.875	14.07
21X10X .625/.750F	70.14	302.2	214.7	9.1	9.3	13.1	20.63	.625	10.00	.750	13.98
21X 9X .625/.875F	71.40	305.0	220.7	9.2	9.4	13.1	21.00	.625	9.00	.875	14.07
21X11X .625/.750F	72.69	305.9	228.8	9.2	9.6	12.8	21.38	.625	11.00	.750	13.98
21X10X .625/.875F	74.39	309.1	237.0	9.3	9.8	12.7	21.88	.625	10.00	.875	14.07
21X 9X .625/1.125F	79.05	316.6	260.1	9.4	10.3	12.5	23.25	.625	9.00	1.125	14.22
21X12X .625/.875F	80.34	316.0	268.9	9.4	10.3	12.2	23.63	.625	12.00	.875	14.87
24X 9X .688/.875F	82.89	359.3	267.5	10.2	10.9	14.6	24.38	.688	9.00	.875	17.55
21X13X .625/.875F	83.30	319.1	285.0	9.5	10.6	11.9	24.50	.625	13.00	.875	14.07
24X10X .688/.875F	85.85	364.3	295.5	10.3	11.2	14.3	25.25	.688	10.00	.875	17.55
21X14X .625/.875F	86.29	321.7	300.9	9.5	10.9	11.6	25.38	.625	14.00	.875	14.07
24X 8X .688/1.125F	86.70	367.5	288.2	10.4	11.3	14.4	25.50	.688	8.00	1.125	17.72
24X11X .688/.875F	88.84	368.8	303.5	10.4	11.5	14.0	26.13	.688	11.00	.875	17.55
24X 9X .688/1.125F	90.54	373.2	311.5	10.5	11.7	14.0	26.63	.688	9.00	1.125	17.72
24X12X .688/.875F	91.80	373.0	321.6	10.5	11.8	13.7	27.00	.688	12.00	.875	17.55
24X13X .688/.875F	94.79	376.7	339.7	10.5	12.1	13.4	27.88	.688	13.00	.875	17.55
24X11X .688/1.125F	98.19	382.7	357.1	10.6	12.4	13.3	28.88	.688	11.00	1.125	17.72
27X 8X .750/1.125F	99.45	427.7	342.6	11.3	12.8	16.0	29.25	.750	8.00	1.125	21.57
27X11X .750/.875F	101.59	429.7	359.4	11.4	13.0	15.5	29.88	.750	11.00	.875	21.38
27X 9X .750/1.125F	103.29	434.5	368.1	11.5	13.2	15.6	30.38	.750	9.00	1.125	21.57
27X12X .750/.875F	104.55	434.7	379.3	11.5	13.3	15.2	30.75	.750	12.00	.875	21.38
27X10X .750/1.125F	107.10	440.7	393.2	11.6	13.6	15.2	31.50	.750	10.00	1.125	21.57
27X11X .750/1.125F	110.94	446.2	418.5	11.6	13.9	14.8	32.63	.750	11.00	1.125	21.57
27X 9X .875/1.375F	122.40	462.7	429.7	11.5	14.0	15.0	36.00	.875	9.00	1.375	25.38
30X10X .875/1.375F	136.00	533.9	524.2	12.6	15.9	16.2	40.00	.875	10.00	1.375	28.00
30X11X .875/1.125F	138.99	536.1	549.5	12.6	16.1	15.7	40.88	.875	13.00	1.125	27.79
30X11X .875/1.375F	148.69	540.9	557.3	12.7	16.2	15.8	41.38	.875	11.00	1.375	28.00
30X14X .875/1.125F	142.80	541.4	577.0	12.7	16.4	15.4	42.00	.875	14.00	1.125	27.79
30X14X .875/1.375F	154.70	558.2	657.1	12.8	17.3	14.7	45.50	.875	14.00	1.375	28.00
33X10X1.000/1.500F	163.20	632.4	642.6	13.5	17.7	17.4	46.00	1.000	10.00	1.500	35.13
33X11X1.000/1.375F	163.64	631.9	647.8	13.5	17.7	17.3	48.13	1.000	11.00	1.375	35.01
36X13X1.000/1.125F	172.14	701.2	715.4	14.5	19.1	18.7	50.63	1.000	13.00	1.125	37.76
33X13X1.000/1.375F	172.99	646.8	719.6	13.6	18.4	16.6	50.88	1.000	13.00	1.375	35.01
36X11X1.000/1.375F	173.84	707.1	724.9	14.5	19.2	18.8	51.13	1.000	11.00	1.375	38.01
36X10X1.000/1.750F	181.90	726.0	784.1	14.7	19.9	18.4	53.50	1.000	10.00	1.750	38.38
33X16X1.000/1.375F	187.00	665.2	826.7	13.7	19.4	15.6	55.00	1.000	16.00	1.375	35.01

0.6250 - 5/8 in.



688 IN. PLATE (AREA= 16.07 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YF	YF	DIMENSIONS			FLANGE		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	DEPTH				WEB THICK	WIDTH	THICK	THICK	THICK	
3X 2X .125/.188T	2.55	14.0	1.9	6.4	.6	.5	3.4	3.19	.125	2.00	.168	.48	
4X 2X .125/.188T	2.99	21.5	2.5	11.0	.8	.5	4.4	4.19	.125	2.00	.168	.61	
3X 3X .125/.188T	3.20	17.1	2.5	8.5	.7	.5	3.4	3.19	.125	3.00	.188	.48	
4X 3X .125/.188T	3.60	25.6	3.3	14.3	.9	.6	4.3	4.19	.125	3.00	.188	.61	
4X 2X .188/.313T	4.69	28.5	3.9	17.3	1.0	.6	4.4	4.31	.188	2.00	.313	.94	
5X 2X .188/.313T	4.90	35.9	4.4	23.5	1.2	.7	5.3	5.25	.188	2.00	.250	1.12	
3X 3X .188/.313T	5.10	22.8	3.9	13.4	.9	.6	3.4	3.31	.188	3.00	.313	.75	
5X 2X .188/.313T	5.30	39.0	5.1	26.9	1.2	.7	5.3	5.31	.188	2.00	.313	1.13	
6X 2X .188/.313T	5.95	50.6	6.4	39.6	1.5	.8	6.2	6.31	.188	2.00	.313	1.32	
6X 3X .188/.313T	6.39	53.3	7.2	44.0	1.6	.8	6.1	6.25	.188	3.00	.250	1.30	
5X 4X .188/.313T	6.60	45.7	7.1	36.4	1.4	.8	5.1	5.25	.188	4.00	.250	1.12	
4X 4X .188/.313T	6.80	37.3	6.6	28.1	1.2	.8	4.2	4.31	.188	4.00	.313	.94	
6X 3X .188/.313T	7.00	57.3	8.3	50.7	1.7	.9	6.1	6.31	.188	3.00	.313	1.32	
6X 4X .188/.313T	7.24	58.2	8.6	52.6	1.7	.9	6.0	6.25	.188	4.00	.250	1.30	
5X 4X .188/.313T	7.45	49.6	8.4	43.0	1.5	.9	5.1	5.31	.188	4.00	.313	1.13	
6X 4X .188/.313T	8.09	62.5	10.3	61.8	1.8	1.0	6.0	6.31	.188	4.00	.313	1.32	
5X 5X .188/.313T	8.50	53.3	10.0	50.6	1.7	1.0	5.0	5.31	.188	5.00	.313	1.13	
7X 3X .250/.438T	9.15	70.9	11.0	76.4	2.0	1.1	6.9	7.31	.250	3.00	.313	2.00	
6X 3X .250/.438T	9.55	64.4	11.3	68.5	1.9	1.1	6.1	6.44	.250	3.00	.438	1.78	
7X 3X .250/.375T	9.79	74.4	12.3	85.3	2.1	1.1	6.9	7.38	.250	3.00	.375	2.02	
8X 3X .250/.313T	10.00	83.8	13.2	102.3	2.3	1.2	7.8	8.31	.250	3.00	.313	2.25	
7X 4X .250/.313T	10.20	76.0	13.3	90.3	2.2	1.2	6.8	8.00	.250	4.00	.313	2.00	
7X 3X .250/.438T	10.40	77.5	13.6	94.0	2.2	1.2	6.9	8.06	.250	3.00	.438	2.03	
8X 3X .250/.375T	10.64	87.6	14.6	113.7	2.4	1.3	7.8	8.38	.250	3.00	.375	2.27	
9X 3X .250/.313T	10.85	96.8	15.4	132.9	2.6	1.4	8.6	9.31	.250	3.00	.313	2.50	
8X 4X .250/.313T	11.05	89.4	15.7	120.1	2.5	1.3	7.7	8.31	.250	4.00	.313	2.25	
7X 5X .250/.313T	11.25	80.2	15.5	103.8	2.3	1.3	6.7	8.31	.250	5.00	.313	2.00	
8X 3X .250/.438T	11.49	91.0	16.1	124.7	2.5	1.4	7.8	8.44	.250	3.00	.438	2.28	
9X 3X .250/.375T	11.90	100.8	17.1	146.9	2.7	1.5	8.6	9.38	.250	3.00	.375	2.52	
9X 4X .250/.313T	11.90	102.7	18.2	154.8	2.8	1.5	8.5	9.31	.250	4.00	.313	2.50	
9X 3X .250/.438T	12.10	104.5	18.7	160.7	2.9	1.5	8.6	9.44	.250	3.00	.438	2.53	
8X 5X .250/.313T	12.10	93.8	18.2	137.2	2.6	1.5	7.5	8.31	.250	5.00	.313	2.25	
9X 4X .250/.375T	12.75	107.1	20.5	173.1	3.0	1.6	8.5	9.38	.250	4.00	.375	2.52	
9X 5X .250/.313T	12.95	107.6	21.1	176.3	3.0	1.6	8.4	9.31	.250	5.00	.313	2.50	
8X 5X .250/.375T	13.19	98.1	20.8	155.3	2.8	1.6	7.5	8.38	.250	5.00	.375	2.27	
7X 5X .250/.438T	13.40	87.5	19.9	131.9	2.6	1.5	6.6	8.44	.250	5.00	.438	2.03	
9X 4X .250/.438T	13.60	110.7	22.6	190.4	3.1	1.7	8.4	9.44	.250	4.00	.438	2.53	
9X 5X .250/.375T	14.04	112.0	23.9	198.1	3.1	1.8	8.3	9.38	.250	5.00	.375	2.52	
8X 5X .250/.438T	14.25	101.5	23.2	172.2	2.9	1.7	7.4	8.44	.250	5.00	.438	2.28	
7X 6X .250/.375T	14.45	101.8	23.8	174.7	2.9	1.7	7.4	8.38	.250	6.00	.375	2.27	
7X 6X .250/.438T	14.99	90.8	23.0	149.3	2.7	1.6	6.5	7.44	.250	6.00	.438	2.03	
9X 5X .250/.438T	15.10	115.8	26.7	219.6	3.3	1.9	8.2	9.44	.250	5.00	.438	2.53	
9X 5X .250/.375T	15.30	115.3	27.2	222.0	3.3	1.9	8.2	9.38	.250	6.00	.375	2.52	
10X 4X .313/.375T	15.74	120.8	25.3	231.3	3.3	1.9	9.2	10.38	.313	4.00	.375	3.46	
8X 6X .250/.438T	15.74	105.2	26.7	194.5	3.1	1.8	7.3	8.44	.250	6.00	.438	2.28	

0.6875 - 11/16 in.

688 IN. PLATE (AREA= 16.07 SQ.IN.)

***** BEAM DIMENSIONS *****													
NOMINAL SIZE	SECTION MODULUS			R	Y <sub>P</sub>	Y <sub>F</sub>	AREA	DEPTH	FLANGE			SHEAR AREA	
	WT/FT	Z <sub>PL</sub>	Z <sub>FL</sub>						INERTIA	WEB THICK	WIDTH		THICK
7X 7X .250/ .438T	16.35	93.6	26.2	166.2	2.8	1.8	6.4	4.81	7.44	.250	7.00	.438	2.03
10X 4X .313/ .438T	16.59	124.5	27.7	252.0	3.5	2.0	9.1	4.88	10.44	.313	4.00	.438	3.48
9X 6X .250/ .438T	16.59	119.6	30.6	246.9	3.4	2.1	8.1	4.88	9.44	.250	6.00	.438	2.53
10X 5X .313/ .375T	17.00	125.9	29.0	261.1	3.5	2.1	9.0	5.00	10.38	.313	5.00	.375	3.46
8X 7X .250/ .438T	17.20	108.2	30.2	215.7	3.2	2.0	7.1	5.06	8.44	.250	7.00	.438	2.28
10X 4X .313/ .500T	17.44	128.0	30.1	272.9	3.6	2.1	9.1	5.13	10.50	.313	4.00	.500	3.58
9X 7X .250/ .438T	18.05	122.9	34.5	273.1	3.6	2.2	7.9	5.31	9.44	.250	7.00	.438	2.53
10X 6X .313/ .375T	18.29	129.9	32.8	289.5	3.7	2.2	8.8	5.38	10.38	.313	6.00	.375	3.46
10X 5X .313/ .500T	19.14	133.0	35.1	310.6	3.8	2.3	8.9	5.63	10.50	.313	5.00	.500	3.50
10X 6X .313/ .438T	19.55	133.7	36.4	318.2	3.8	2.4	8.7	5.75	10.44	.313	6.00	.438	3.48
10X 5X .313/ .563T	20.20	136.1	38.1	334.9	3.9	2.5	8.8	5.94	10.56	.313	5.00	.563	3.52
10X 6X .313/ .500T	20.84	137.1	40.1	346.8	4.0	2.5	8.7	6.13	10.50	.313	6.00	.500	3.50
10X 7X .313/ .438T	21.05	137.2	40.7	349.4	4.0	2.5	8.6	6.19	10.44	.313	7.00	.438	3.48
9X 7X .313/ .500T	21.45	125.6	39.8	307.9	3.7	2.5	7.7	6.31	9.50	.313	7.00	.500	3.19
12X 4X .375/ .469T	21.69	154.2	39.2	411.2	4.3	2.7	10.5	6.38	12.47	.375	4.00	.469	4.93
10X 6X .313/ .563T	22.10	140.2	43.7	374.5	4.1	2.7	8.6	6.50	10.56	.313	6.00	.563	3.52
10X 7X .313/ .500T	22.54	140.5	45.0	381.2	4.1	2.7	8.5	6.63	10.50	.313	7.00	.500	3.50
12X 4X .375/ .531T	22.54	157.7	42.1	438.9	4.4	2.8	10.4	6.63	12.53	.375	4.00	.531	4.96
9X 7X .313/ .563T	22.95	128.5	43.7	334.2	3.8	2.6	7.6	6.75	9.56	.313	7.00	.563	3.21
9X 8X .313/ .500T	23.15	128.3	44.3	335.2	3.8	2.6	7.6	6.81	9.50	.313	8.00	.500	3.19
12X 5X .375/ .469T	23.26	159.9	44.7	459.9	4.5	2.9	10.3	6.84	12.47	.375	5.00	.469	4.93
12X 4X .375/ .594T	23.39	160.9	44.9	466.3	4.5	2.9	10.4	6.88	12.59	.375	4.00	.594	4.98
10X 7X .313/ .563T	24.00	143.4	49.2	411.9	4.2	2.9	8.4	7.06	10.56	.313	7.00	.563	3.52
10X 8X .313/ .500T	24.24	143.4	50.0	414.9	4.2	2.9	8.3	7.13	10.50	.313	8.00	.500	3.58
12X 4X .375/ .656T	24.24	163.7	47.7	492.7	4.6	3.0	10.3	7.13	12.66	.375	4.00	.656	5.01
9X 8X .313/ .563T	24.85	131.0	48.7	363.8	3.9	2.8	7.5	7.31	9.56	.313	8.00	.563	3.21
12X 6X .375/ .469T	24.85	164.4	50.2	506.1	4.7	3.1	10.1	7.31	12.47	.375	6.00	.469	4.93
12X 5X .375/ .594T	25.40	166.5	51.8	524.5	4.7	3.2	10.1	7.47	12.59	.375	5.00	.594	4.98
10X 8X .313/ .563T	25.94	146.3	54.9	440.8	4.4	3.1	8.2	7.63	10.56	.313	8.00	.563	3.52
12X 5X .375/ .656T	26.45	169.5	55.3	556.6	4.8	3.3	10.1	7.78	12.66	.375	5.00	.656	5.81
12X 7X .375/ .469T	26.45	168.3	55.7	550.6	4.8	3.3	9.9	7.78	12.47	.375	7.00	.469	4.93
12X 6X .375/ .594T	27.40	171.1	58.7	580.4	4.9	3.4	9.9	8.06	12.59	.375	6.00	.594	4.98
12X 7X .375/ .531T	27.95	171.9	60.8	593.3	4.9	3.5	9.8	8.22	12.53	.375	7.00	.531	4.96
12X 6X .375/ .656T	28.70	174.0	62.9	616.8	5.0	3.5	9.8	8.44	12.66	.375	6.00	.656	5.81
12X 7X .375/ .594T	29.44	175.0	65.7	633.8	5.1	3.6	9.7	8.66	12.59	.375	7.00	.594	4.98
12X 8X .375/ .531T	29.75	175.1	66.8	638.4	5.1	3.7	9.6	8.75	12.53	.375	8.00	.531	4.96
14X 5X .438/ .531T	29.85	192.6	62.2	715.7	5.4	3.7	11.5	8.78	14.53	.438	5.00	.531	6.67
14X 5X .438/ .594T	30.91	196.1	66.2	756.2	5.5	3.9	11.4	9.09	14.59	.438	5.00	.594	6.69
12X 8X .375/ .594T	31.45	178.2	72.5	684.5	5.2	3.8	9.4	9.25	12.59	.375	8.00	.594	4.98
12X 9X .375/ .531T	31.55	178.0	73.1	684.9	5.2	3.8	9.4	9.28	12.53	.375	9.00	.531	4.96
14X 6X .438/ .531T	31.65	197.8	69.4	781.5	5.5	4.0	11.3	9.31	14.53	.438	6.00	.531	6.67
14X 5X .438/ .656T	31.99	199.3	70.3	797.6	5.6	4.0	11.3	9.41	14.66	.438	5.00	.656	6.72
16X 5X .438/ .531T	32.84	222.1	74.6	961.3	6.1	4.3	12.9	9.66	16.53	.438	5.00	.531	7.54
14X 6X .438/ .594T	32.95	201.3	74.2	828.1	5.7	4.1	11.2	9.69	14.59	.438	6.00	.594	6.69
14X 5X .438/ .719T	33.05	202.3	74.3	836.9	5.7	4.1	11.3	9.72	14.72	.438	5.00	.719	6.75



688 IN. PLATE (AREA= 16.07 SQ.IN.)

NOMINAL SIZE	SECTION		MODULUS		INERTIA	R	YP	VF	AREA	BEAM DIMENSIONS		FLANGE	THICK	SHEAR AREA
	WT/FT	ZPL	ZFL	INERTIA						DEPTH	THICK	WIDTH	THICK	
12X 8X .375/.656T	33.15	181.1	78.2	729.1	5.3	4.0	9.3	9.75	12.66	.375	.656	8.00	.656	5.01
14X 7X .438/.531T	33.46	202.2	76.5	844.7	5.7	4.2	11.0	9.84	14.53	.438	.531	7.00	.531	6.67
16X 5X .438/.594T	33.90	225.9	79.2	1013.0	6.2	4.5	12.8	9.97	16.59	.438	.594	5.00	.594	7.57
14X 6X .438/.656T	34.20	204.6	79.0	875.0	5.8	4.3	11.1	10.06	14.66	.438	.656	6.00	.656	6.72
16X 6X .438/.531T	34.65	227.9	82.7	1045.2	6.3	4.6	12.6	10.19	16.53	.438	.531	6.00	.531	7.54
16X 5X .438/.656T	34.95	229.5	83.7	1064.2	6.4	4.6	12.7	10.28	16.66	.438	.656	5.00	.656	7.60
14X 7X .438/.594T	34.95	205.7	82.2	897.0	5.8	4.4	10.9	10.28	14.59	.438	.594	7.00	.594	6.69
14X 8X .438/.531T	35.29	206.0	83.7	905.4	5.9	4.4	10.8	10.38	14.53	.438	.531	8.00	.531	6.67
16X 6X .438/.594T	35.90	231.8	88.2	1104.0	6.4	4.8	12.5	10.56	16.59	.438	.594	6.00	.594	7.57
16X 5X .438/.719T	36.01	232.8	88.3	1114.5	6.5	4.8	12.4	10.72	16.53	.438	.719	5.00	.719	7.62
16X 7X .438/.531T	36.45	232.8	90.8	1124.7	6.5	4.8	12.4	10.72	16.53	.438	.531	7.00	.531	7.54
14X 8X .438/.594T	36.99	209.5	90.2	963.1	6.0	4.6	10.7	10.88	14.59	.438	.594	8.00	.594	6.69
14X 9X .438/.531T	37.09	209.3	90.8	963.6	6.0	4.6	10.6	10.91	14.53	.438	.531	9.00	.531	6.67
16X 7X .438/.594T	37.94	236.7	97.2	1190.7	6.6	5.0	12.2	11.16	16.59	.438	.594	7.00	.594	7.57
16X 8X .438/.531T	38.25	237.0	98.8	1200.4	6.6	5.1	12.2	11.25	16.53	.438	.531	8.00	.531	7.54
16X 6X .438/.719T	38.45	238.8	99.2	1219.7	6.7	5.1	12.3	11.31	16.72	.438	.719	6.00	.719	7.62
16X 7X .438/.656T	39.41	240.4	103.5	1255.5	6.7	5.2	12.1	11.59	16.66	.438	.656	7.00	.656	7.60
16X 8X .438/.594T	39.95	241.0	106.1	1273.1	6.8	5.3	12.0	11.75	16.59	.438	.594	8.00	.594	7.57
16X 9X .438/.531T	40.05	240.8	106.8	1273.6	6.8	5.3	11.9	11.78	16.53	.438	.531	9.00	.531	7.54
16X 7X .438/.719T	40.90	243.8	110.0	1319.8	6.9	5.4	12.0	12.03	16.72	.438	.719	7.00	.719	7.62
16X 8X .438/.656T	41.65	244.7	113.5	1344.9	6.9	5.5	11.9	12.25	16.66	.438	.656	8.00	.656	7.60
18X 5X .500/.656T	41.75	261.0	115.9	1427.8	7.1	5.5	13.9	12.28	16.59	.500	.656	5.00	.656	9.67
16X 9X .438/.594T	41.96	244.8	112.1	1352.8	6.9	5.5	11.8	12.34	16.59	.438	.594	9.00	.594	7.57
16X 5X .500/.875T	42.09	240.9	103.3	1269.6	6.7	5.3	12.3	12.38	16.88	.500	.875	5.00	.875	8.78
18X 6X .500/.594T	42.70	263.7	107.9	1476.8	7.2	5.6	13.7	12.56	18.59	.500	.594	6.00	.594	9.64
18X 5X .500/.719T	42.81	264.6	107.9	1487.6	7.2	5.6	13.8	12.59	18.72	.500	.719	5.00	.719	9.70
14X10X .438/.656T	43.15	218.8	114.0	1150.0	6.3	5.3	10.1	12.69	14.66	.438	.656	10.00	.656	6.72
16X 8X .438/.719T	43.35	248.0	120.8	1414.1	7.0	5.7	11.7	12.75	16.72	.438	.719	8.00	.719	7.62
16X 9X .438/.656T	43.89	248.3	123.4	1429.8	7.0	5.8	11.6	12.91	16.66	.438	.656	9.00	.656	7.60
18X 6X .500/.656T	44.00	267.6	113.9	1546.2	7.3	5.8	13.6	12.94	18.66	.500	.656	6.00	.656	9.67
16X10X .438/.594T	44.00	248.1	124.2	1430.2	7.0	5.8	11.5	12.94	16.59	.438	.594	10.00	.594	7.57
14X11X .438/.656T	45.36	221.2	122.5	1210.2	6.4	5.5	9.9	13.34	14.66	.438	.656	11.00	.656	6.72
16X 9X .438/.719T	45.80	251.7	131.8	1505.4	7.1	6.0	11.4	13.47	16.72	.438	.719	9.00	.719	7.62
16X10X .438/.656T	46.10	251.6	133.2	1511.2	7.1	6.0	11.3	13.56	16.66	.438	.656	10.00	.656	7.60
18X 7X .500/.719T	47.70	277.8	135.0	1735.4	7.6	6.3	13.1	14.03	18.72	.500	.719	7.00	.719	9.70
18X 6X .500/.875T	48.45	279.6	135.0	1761.4	7.7	6.4	13.2	14.25	18.88	.500	.875	6.00	.875	9.78
18X 8X .500/.719T	50.15	281.9	144.0	1849.8	7.7	6.6	12.8	14.75	18.72	.500	.719	8.00	.719	9.70
18X 9X .500/.656T	50.69	282.4	146.9	1870.0	7.8	6.6	12.7	14.91	18.66	.500	.656	9.00	.656	9.64
18X10X .500/.594T	50.80	282.2	147.9	1870.3	7.8	6.6	12.6	14.94	18.59	.500	.594	10.00	.594	9.64
18X 7X .500/.875T	51.44	285.3	149.5	1919.0	7.8	6.7	12.8	15.13	18.88	.500	.875	7.00	.875	9.78
18X 9X .500/.719T	52.60	286.1	155.9	1958.2	7.9	6.8	12.5	15.47	18.72	.500	.719	9.00	.719	9.70
18X10X .500/.656T	52.90	286.2	157.7	1967.0	7.9	6.9	12.5	15.56	18.66	.500	.656	10.00	.656	9.67
18X 8X .500/.875T	54.40	290.2	164.0	2050.3	8.0	7.1	12.5	16.00	18.88	.500	.875	8.00	.875	9.78
18X11X .500/.656T	55.15	289.6	166.7	2062.3	8.0	7.1	12.2	16.22	18.66	.500	.656	11.00	.656	9.67
18X11X .500/.719T	57.49	293.3	180.0	2164.5	8.1	7.4	12.0	16.91	18.72	.500	.719	11.00	.719	9.70

0.6875 - 11/16 in.

0.688 IN. PLATE (AREA= 16.07 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	THICK	
10X12X .500/.719T	59.94	296.2	131.8	2259.7	8.2	7.6	11.0	17.63	10.72	.500	12.00	.719	9.70
10X10X .500/.875T	60.35	298.0	192.9	2291.0	8.2	7.7	11.9	17.75	10.88	.500	10.00	.875	9.70
21X 8X .625/.875T	68.44	347.1	209.2	2945.8	9.0	8.5	14.1	20.13	21.88	.625	8.00	.875	14.10
21X10X .625/.750T	70.14	349.3	219.5	3024.7	9.1	8.7	13.0	20.63	21.75	.625	10.00	.750	14.02
21X 9X .625/.875T	71.48	352.5	225.7	3105.2	9.2	8.8	13.8	21.00	21.88	.625	9.00	.875	14.10
21X11X .625/.750T	72.69	353.6	233.9	3158.7	9.2	8.9	13.5	21.38	21.75	.625	11.00	.750	14.02
21X10X .625/.875T	74.39	357.3	242.4	3259.0	9.3	9.1	13.4	21.88	21.88	.625	10.00	.875	14.10
21X 9X .625/1.125T	79.05	365.9	266.0	3315.0	9.5	9.6	13.2	23.25	22.13	.625	9.00	1.125	14.26
21X12X .625/.875T	80.34	365.3	274.9	3340.3	9.4	9.7	12.9	23.63	21.88	.625	12.00	.875	14.10
24X 9X .688/.875T	82.89	412.6	274.2	4211.3	10.2	10.2	15.4	24.38	24.88	.688	9.00	.875	17.59
21X13X .625/.875T	83.30	368.8	291.4	3673.5	9.5	10.0	12.6	24.50	21.88	.625	13.00	.875	14.10
24X10X .688/.875T	85.85	410.4	292.5	4401.4	10.3	10.5	15.0	25.25	24.00	.688	10.00	.875	17.59
21X14X .625/.875T	86.29	371.9	307.7	3799.8	9.6	10.2	12.4	25.38	21.88	.625	14.00	.875	14.10
24X 8X .688/1.125T	86.70	421.9	295.4	4486.2	10.4	10.6	15.2	25.50	25.13	.688	8.00	1.125	17.76
24X11X .688/.875T	88.84	423.5	310.9	4583.6	10.4	10.8	14.7	26.13	24.88	.688	11.00	.875	17.59
24X 9X .688/1.125T	90.54	428.4	319.2	4722.7	10.5	11.0	14.8	26.63	25.13	.688	9.00	1.125	17.76
24X12X .688/.875T	91.80	428.3	329.4	4760.7	10.5	11.1	14.5	27.00	24.88	.688	12.00	.875	17.59
24X13X .688/.875T	94.79	432.6	347.9	4929.8	10.6	11.4	14.2	27.88	24.88	.688	13.00	.875	17.59
24X11X .688/1.125T	98.19	439.3	365.8	5153.3	10.7	11.7	14.1	28.88	25.13	.688	11.00	1.125	17.76
27X 8X .750/1.125T	99.45	487.8	351.7	5889.6	11.4	12.1	16.7	29.25	28.13	.750	8.00	1.125	21.61
27X11X .750/.875T	101.59	490.1	368.7	6011.3	11.4	12.3	16.3	29.88	27.88	.750	11.00	.875	21.43
27X 9X .750/1.125T	103.29	495.5	377.8	6177.1	11.5	12.5	16.4	30.38	28.13	.750	9.00	1.125	21.61
27X12X .750/.875T	104.55	495.7	389.1	6227.6	11.5	12.6	16.0	30.75	27.88	.750	12.00	.875	21.43
27X10X .750/1.125T	107.10	502.4	403.5	6446.9	11.6	12.8	16.0	31.50	28.13	.750	10.00	1.125	21.61
27X11X .750/1.125T	110.94	508.7	429.4	6709.5	11.7	13.2	15.6	32.63	28.13	.750	11.00	1.125	21.61
27X 9X .875/1.375T	122.40	524.3	441.6	6967.6	11.6	13.3	15.8	36.00	28.38	.875	9.00	1.375	25.43
30X10X .875/1.375T	136.00	602.6	538.6	9120.6	12.8	15.1	16.9	40.00	31.38	.875	10.00	1.375	28.06
30X13X .875/1.125T	138.99	605.0	564.4	9291.1	12.8	15.4	16.5	40.88	31.13	.875	13.00	1.125	27.84
30X11X .875/1.375T	140.69	610.3	572.6	9473.8	12.8	15.5	16.5	41.38	31.38	.875	11.00	1.375	28.06
30X14X .875/1.125T	142.80	611.0	592.5	9571.0	12.8	15.7	16.2	42.00	31.13	.875	14.00	1.125	27.84
30X12X .875/1.375T	154.78	629.6	674.8	10445.0	13.0	16.6	15.5	45.50	31.38	.875	14.00	1.375	28.06
33X10X1.000/1.500T	163.20	706.9	660.8	12018.4	13.7	17.0	18.2	48.00	34.50	1.000	10.00	1.500	35.19
33X11X1.000/1.375T	163.64	706.4	666.1	12222.6	13.7	17.0	18.0	48.13	34.38	1.000	11.00	1.375	35.07
36X13X1.000/1.125T	172.14	781.4	735.5	14327.5	14.7	18.3	19.5	50.63	37.13	1.000	13.00	1.125	37.82
33X13X1.000/1.375T	172.99	722.8	739.6	12018.8	13.8	17.7	17.3	50.88	34.38	1.000	13.00	1.375	35.07
36X11X1.000/1.375T	173.84	787.7	745.4	14579.3	14.7	18.5	19.6	51.13	37.38	1.000	11.00	1.375	38.07
36X10X1.000/1.750T	161.90	888.3	806.3	15514.7	14.9	19.2	19.2	53.50	37.75	1.000	10.00	1.750	39.44
33X16X1.000/1.375T	187.08	743.1	849.3	13897.7	14.0	18.7	16.4	55.00	34.38	1.000	16.00	1.375	35.07

0.6875 - 11/16 in.



0.750 IN. PLATE (AREA= 19.13 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YP	YF	AREA	DEPTH	FLANGE		SHEAR
WT/FT	ZPL	ZFL	INERTIA	THICK	WIDTH						THICK		
3X 2K .125/ .188T	2.55	14.4	2.0	6.9	.6	.5	3.5	.75	3.19	.125	2.00	.188	.49
4X 2K .125/ .188T	2.99	22.2	2.6	11.5	.8	.5	4.4	.88	4.19	.125	2.00	.188	.62
3X 3K .125/ .188T	3.20	17.7	2.6	9.0	.7	.5	3.4	.94	3.19	.125	3.00	.188	.49
4X 3K .125/ .188T	3.60	26.7	3.4	14.9	.9	.6	4.4	1.06	4.19	.125	3.00	.188	.62
4X 2K .188/ .313T	4.69	29.9	4.0	18.0	.9	.6	4.5	1.38	4.31	.188	2.00	.313	.95
5X 2K .188/ .250T	4.90	37.9	4.5	24.3	1.1	.6	5.4	1.44	5.25	.188	2.00	.250	1.13
3X 3K .188/ .313T	5.10	24.0	4.1	14.1	.8	.6	3.5	1.50	3.31	.188	3.00	.313	.76
5X 2K .188/ .313T	5.30	41.4	5.2	27.8	1.2	.7	5.4	1.56	5.31	.188	2.00	.313	1.14
6X 2K .188/ .313T	5.95	54.3	6.5	40.8	1.4	.8	6.3	1.75	6.31	.188	2.00	.313	1.33
6X 3K .188/ .250T	6.39	57.4	7.3	45.3	1.5	.8	6.2	1.88	6.25	.188	3.00	.250	1.32
5X 4K .188/ .250T	6.60	49.3	7.2	37.6	1.3	.8	5.2	1.34	5.25	.188	4.00	.250	1.13
4X 4K .188/ .313T	6.80	40.2	6.7	29.2	1.2	.7	4.3	2.00	4.31	.188	4.00	.313	.95
6X 3K .188/ .313T	7.00	62.1	8.4	52.3	1.6	.8	6.2	2.06	6.31	.188	3.00	.313	1.33
6X 4K .188/ .250T	7.24	63.3	8.9	54.5	1.6	.9	6.1	2.13	6.25	.188	4.00	.250	1.32
5X 4K .188/ .313T	7.45	53.9	8.5	44.6	1.4	.8	5.2	2.19	5.31	.188	4.00	.313	1.14
6X 4K .188/ .313T	8.09	68.5	10.4	63.9	1.7	.9	6.1	2.38	6.31	.188	4.00	.313	1.33
5X 5K .188/ .313T	8.50	58.3	10.2	52.5	1.6	.9	5.2	2.50	5.31	.188	5.00	.313	1.14
7X 3K .250/ .313T	9.15	78.0	11.2	78.9	1.9	1.0	7.0	2.69	7.31	.250	3.00	.313	2.02
6X 3K .250/ .438T	9.55	71.0	11.5	70.9	1.8	1.0	6.2	2.81	6.44	.250	3.00	.438	1.80
7X 3K .250/ .375T	9.79	82.3	12.5	88.1	2.0	1.1	7.1	2.88	7.38	.250	3.00	.375	2.03
8X 3K .250/ .313T	10.00	93.0	13.3	105.5	2.2	1.1	7.9	2.94	8.31	.250	3.00	.313	2.27
7X 4K .250/ .313T	10.20	84.3	13.4	93.3	2.1	1.1	7.0	3.08	7.31	.250	4.00	.313	2.02
7X 3K .250/ .438T	10.40	86.1	13.8	97.2	2.1	1.1	7.1	3.06	7.44	.250	3.00	.438	2.05
8X 3K .250/ .375T	10.64	97.6	14.8	117.4	2.3	1.2	7.9	3.13	8.38	.250	3.00	.375	2.28
9X 3K .250/ .313T	10.85	108.1	15.6	137.0	2.5	1.3	8.8	3.19	9.31	.250	3.00	.313	2.52
8X 4K .250/ .313T	11.05	99.8	15.9	124.1	2.4	1.2	7.8	3.25	8.31	.250	4.00	.313	2.27
7X 5K .250/ .313T	11.25	89.5	15.7	107.4	2.2	1.2	6.9	3.31	7.31	.250	5.00	.313	2.02
8X 3K .250/ .438T	11.25	101.7	16.3	128.8	2.4	1.3	7.9	3.31	8.44	.250	3.00	.438	2.30
9X 3K .250/ .375T	11.49	113.0	17.2	151.5	2.6	1.3	8.8	3.38	9.38	.250	3.00	.375	2.53
9X 4K .250/ .313T	11.90	115.3	18.4	159.8	2.7	1.4	8.7	3.50	9.31	.250	4.00	.313	2.52
9X 3K .250/ .438T	12.10	117.4	18.9	165.9	2.7	1.4	8.8	3.56	9.44	.250	3.00	.438	2.55
8X 5K .250/ .313T	12.10	105.3	18.4	141.9	2.5	1.3	7.7	3.56	8.31	.250	5.00	.313	2.27
9X 4K .250/ .375T	12.75	120.7	20.7	179.0	2.8	1.5	8.6	3.75	9.38	.250	4.00	.375	2.53
9X 5K .250/ .313T	12.95	121.4	21.3	182.4	2.8	1.5	8.6	3.81	9.31	.250	5.00	.313	2.52
8X 5K .250/ .375T	13.19	110.6	21.0	160.9	2.6	1.5	7.7	3.88	8.38	.250	5.00	.375	2.20
7X 5K .250/ .438T	13.40	98.5	20.1	137.0	2.4	1.4	6.8	3.94	7.44	.250	5.00	.438	2.05
9X 4K .250/ .438T	13.60	125.2	22.9	197.1	2.9	1.6	8.6	4.08	9.44	.250	4.00	.438	2.55
9X 5K .250/ .375T	14.04	126.8	24.1	205.3	3.0	1.6	8.5	4.13	9.38	.250	5.00	.375	2.53
8X 5K .250/ .438T	14.25	114.9	23.4	178.8	2.8	1.6	7.6	4.19	8.44	.250	5.00	.438	2.30
8X 6K .250/ .375T	14.45	115.3	24.0	181.4	2.8	1.6	7.6	4.25	8.38	.250	6.00	.375	2.20
7X 6K .250/ .438T	14.89	102.8	23.3	155.4	2.6	1.5	6.7	4.38	7.44	.250	6.00	.438	2.05
9X 5K .250/ .438T	15.10	131.5	26.9	227.9	3.1	1.7	8.5	4.44	9.44	.250	5.00	.438	2.55
9X 6K .250/ .375T	15.30	131.7	27.5	230.4	3.1	1.7	8.4	4.50	9.38	.250	6.00	.375	2.53
10X 4K .313/ .375T	15.74	137.0	25.6	239.7	3.2	1.8	9.4	4.63	10.38	.313	4.00	.375	3.48
8X 6K .250/ .438T	15.74	119.5	27.0	202.4	2.9	1.7	7.5	4.63	8.44	.250	6.00	.438	2.30

0.7500 - 3/4 in.

0.750 IN. PLATE (AREA= 19.13 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS										BEAM	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	AREA	SHEAR	
7X 7X	.250/	16.35	106.4	26.4	173.4	2.7	1.6	6.6	4.81	7.44	.250	7.00	.438	2.85		
10X 4X	.313/	16.59	141.6	26.0	261.6	3.3	1.8	9.3	4.88	10.44	.313	4.00	.438	3.58		
9X 6X	.250/	16.59	136.5	30.9	256.9	3.3	1.9	8.3	4.88	9.44	.250	6.00	.438	2.55		
10X 5X	.313/	17.00	143.2	29.4	271.2	3.4	1.9	9.2	5.00	10.38	.313	5.00	.375	3.48		
8X 7X	.250/	17.28	123.4	30.5	225.0	3.1	1.8	7.4	5.06	8.44	.250	7.00	.438	2.30		
10X 4X	.313/	17.44	145.8	30.5	283.6	3.4	1.9	9.3	5.13	10.50	.313	4.00	.500	3.52		
9X 7X	.250/	18.05	140.6	34.9	284.7	3.4	2.0	8.2	5.31	9.44	.250	7.00	.438	2.55		
10X 6X	.313/	18.29	148.3	33.1	301.2	3.5	2.0	9.1	5.38	10.38	.313	6.00	.375	3.48		
10X 5X	.313/	19.14	152.1	35.5	323.5	3.6	2.1	9.1	5.63	10.50	.313	5.00	.500	3.52		
10X 6X	.313/	19.55	153.8	36.8	331.7	3.7	2.2	9.0	5.75	10.44	.313	6.00	.438	3.58		
10X 5X	.313/	20.28	155.9	38.5	349.4	3.7	2.2	9.1	5.94	10.56	.313	5.00	.563	3.54		
10X 6X	.313/	20.84	157.3	40.5	362.2	3.8	2.3	8.9	6.13	10.50	.313	6.00	.500	3.52		
10X 7X	.313/	21.05	157.3	41.2	365.0	3.8	2.3	8.9	6.19	10.44	.313	7.00	.438	3.50		
9X 7X	.313/	21.45	144.1	40.2	322.3	3.6	2.2	8.0	6.31	9.50	.313	7.00	.500	3.21		
12X 4X	.375/	21.69	176.5	39.7	428.5	4.1	2.4	10.8	6.38	12.47	.375	4.00	.469	4.96		
10X 6X	.313/	22.10	161.0	44.1	391.8	3.9	2.4	8.9	6.50	10.56	.313	6.00	.563	3.54		
10X 7X	.313/	22.54	161.5	45.5	399.1	3.9	2.5	8.8	6.63	10.50	.313	7.00	.500	3.52		
12X 4X	.375/	22.95	180.7	42.6	457.7	4.2	2.5	10.7	6.63	12.53	.375	4.00	.531	4.98		
9X 7X	.313/	22.95	147.7	44.2	350.6	3.7	2.4	7.9	6.75	9.56	.313	7.00	.563	3.23		
9X 8X	.313/	23.15	147.5	44.8	352.2	3.7	2.4	7.9	6.81	9.50	.313	8.00	.500	3.21		
12X 5X	.375/	23.26	183.4	45.3	480.1	4.3	2.6	10.6	6.84	12.47	.375	5.00	.469	4.96		
12X 4X	.375/	23.39	184.6	45.5	486.9	4.3	2.6	10.7	6.88	12.59	.375	4.00	.594	5.88		
10X 7X	.313/	24.00	165.1	49.7	432.1	4.1	2.6	8.7	7.06	10.56	.313	7.00	.563	3.54		
10X 8X	.313/	24.24	165.2	50.5	435.4	4.1	2.6	8.6	7.13	10.50	.313	8.00	.500	3.52		
12X 4X	.375/	24.24	188.0	48.3	515.0	4.4	2.7	10.7	7.13	12.66	.375	4.00	.656	5.83		
9X 8X	.313/	24.85	150.9	49.2	382.6	3.8	2.5	7.8	7.31	9.56	.313	8.00	.563	3.23		
12X 6X	.375/	24.85	189.0	50.8	529.4	4.5	2.8	10.4	7.31	12.47	.375	6.00	.469	4.96		
12X 5X	.375/	25.40	191.4	52.4	549.0	4.5	2.9	10.5	7.47	12.59	.375	5.00	.594	5.00		
10X 8X	.313/	25.94	168.7	55.5	472.1	4.2	2.8	8.5	7.63	10.56	.313	8.00	.563	3.54		
12X 5X	.375/	26.45	195.1	56.0	583.4	4.7	3.0	10.4	7.78	12.66	.375	5.00	.656	5.83		
12X 7X	.375/	26.45	193.7	56.4	577.1	4.6	3.0	10.2	7.78	12.47	.375	7.00	.469	4.96		
12X 6X	.375/	27.40	197.1	59.4	609.0	4.7	3.1	10.3	8.06	12.59	.375	6.00	.594	5.00		
12X 7X	.375/	27.95	198.1	61.5	623.1	4.8	3.1	10.1	8.22	12.53	.375	7.00	.531	4.98		
12X 6X	.375/	28.70	200.7	63.7	646.3	4.8	3.2	10.2	8.44	12.66	.375	6.00	.656	5.83		
12X 7X	.375/	29.44	201.9	66.4	666.8	4.9	3.3	10.0	8.66	12.59	.375	7.00	.594	5.00		
12X 8X	.375/	29.75	202.1	67.6	672.9	4.9	3.3	9.9	8.75	12.53	.375	8.00	.531	4.98		
14X 5X	.438/	29.85	221.5	63.1	750.5	5.2	3.4	11.9	8.78	14.53	.438	5.00	.531	6.69		
14X 5X	.438/	30.91	225.7	67.1	793.8	5.3	3.5	11.8	9.09	14.59	.438	5.00	.594	6.72		
12X 8X	.375/	31.45	205.9	73.4	721.9	5.0	3.5	9.8	9.25	12.59	.375	8.00	.594	5.00		
12X 9X	.375/	31.55	205.6	74.0	722.4	5.0	3.5	9.8	9.25	12.53	.375	9.00	.531	4.98		
14X 6X	.438/	31.65	227.8	70.3	821.1	5.4	3.6	11.7	9.31	14.53	.438	6.00	.531	6.69		
14X 5X	.438/	31.99	229.6	71.3	838.3	5.4	3.7	11.8	9.41	14.66	.438	5.00	.656	6.75		
16X 5X	.438/	32.84	255.7	75.7	1009.2	5.9	3.9	13.3	9.66	16.53	.438	5.00	.531	7.57		
14X 6X	.438/	32.95	231.9	75.2	871.2	5.5	3.8	11.6	9.69	14.59	.438	6.00	.594	6.72		
14X 5X	.438/	33.05	233.2	75.3	880.6	5.5	3.8	11.7	9.72	14.72	.438	5.00	.719	6.78		

0.7500 - 3/4 in.



.750 IN. PLATE (AREA= 19.13 SQ.IN.)

NOMINAL SIZE	WF/FT	SECTION MODULUS			R	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA					THICK	FLANGE	
12X 8X .375/.656T	33.15	209.4	79.2	770.4	5.2	3.7	9.75	12.66	.375	8.00	.656
14X 7X .438/.531T	33.46	233.1	77.6	889.3	5.5	3.0	11.5	14.53	.438	7.00	.531
16X 5X .438/.594T	33.90	260.2	80.4	1064.6	6.0	4.1	13.2	16.59	.438	5.00	.594
14X 6X .438/.656T	34.20	236.0	80.1	921.7	5.6	3.9	11.5	14.66	.438	6.00	.656
16X 6X .438/.531T	34.65	262.6	84.0	1099.3	6.1	4.2	13.1	16.53	.438	6.00	.531
16X 5X .438/.656T	34.95	264.5	85.0	1119.5	6.2	4.2	13.2	16.66	.438	5.00	.656
14X 7X .438/.594T	34.95	237.3	83.3	945.7	5.7	4.0	11.4	14.59	.438	7.00	.594
14X 8X .438/.531T	35.29	237.7	84.8	954.9	5.7	4.0	11.3	14.53	.438	8.00	.531
16X 6X .438/.594T	35.90	267.2	89.5	1162.5	6.3	4.4	13.0	16.59	.438	6.00	.594
16X 5X .438/.719T	36.01	268.4	89.6	1173.6	6.3	4.4	13.1	16.72	.438	5.00	.719
16X 7X .438/.531T	36.45	268.4	92.1	1184.9	6.3	4.4	12.9	16.53	.438	7.00	.531
14X 8X .438/.594T	36.99	241.9	91.4	1017.6	5.8	4.2	11.1	14.53	.438	8.00	.594
16X 7X .438/.531T	37.09	241.7	92.0	1018.2	5.8	4.2	11.1	14.53	.438	9.00	.531
16X 7X .438/.594T	37.94	273.1	98.6	1256.3	6.4	4.6	12.7	16.59	.438	7.00	.594
16X 8X .438/.531T	38.25	273.5	100.2	1267.0	6.5	4.6	12.6	16.53	.438	8.00	.531
16X 6X .438/.719T	38.45	275.5	100.6	1287.5	6.5	4.7	12.8	16.72	.438	6.00	.719
16X 7X .438/.656T	39.41	277.5	105.0	1326.5	6.6	4.8	12.6	16.66	.438	7.00	.656
16X 8X .438/.594T	39.95	278.2	107.6	1345.8	6.6	4.8	12.5	16.59	.438	8.00	.594
16X 9X .438/.531T	40.05	278.0	108.3	1346.6	6.6	4.8	12.4	16.53	.438	9.00	.531
16X 7X .438/.719T	40.90	281.5	111.6	1396.4	6.7	5.0	12.5	16.72	.438	7.00	.719
16X 8X .438/.656T	41.65	282.6	115.1	1423.9	6.7	5.0	12.4	16.66	.438	8.00	.656
16X 9X .438/.594T	41.75	300.3	104.6	1506.1	6.9	5.1	14.4	18.66	.500	5.00	.594
16X 9X .438/.594T	41.96	282.7	116.7	1432.0	6.7	5.0	12.3	16.59	.438	9.00	.594
16X 5X .500/.875T	42.09	277.5	104.9	1342.2	6.5	4.8	12.8	16.88	.500	5.00	.875
16X 6X .500/.594T	42.70	303.4	109.8	1559.0	7.0	5.1	14.2	18.59	.500	6.00	.594
16X 5X .500/.719T	42.81	304.6	109.7	1570.5	7.0	5.2	14.3	18.72	.500	5.00	.719
14X10X .438/.656T	43.15	253.1	115.5	1222.2	6.2	4.8	10.6	14.66	.438	10.00	.656
16X 8X .438/.719T	43.35	286.5	122.5	1499.5	6.9	5.2	12.2	16.72	.438	8.00	.719
16X 9X .438/.656T	43.89	287.0	125.1	1516.9	6.9	5.3	12.1	16.66	.438	9.00	.656
16X 6X .500/.656T	44.00	308.0	115.8	1634.0	7.1	5.3	14.1	18.66	.500	6.00	.656
16X10X .438/.594T	44.00	286.7	126.0	1517.5	6.9	5.3	12.0	16.59	.438	10.00	.594
16X11X .438/.656T	45.36	256.1	124.2	1288.8	6.3	5.0	10.4	14.66	.438	11.00	.656
16X 9X .438/.719T	45.80	291.0	133.6	1599.8	7.0	5.5	12.0	16.72	.438	9.00	.719
16X10X .438/.656T	46.10	290.9	135.1	1606.4	7.0	5.5	11.9	16.66	.438	10.00	.656
16X 7X .500/.719T	47.70	319.1	134.2	1809.3	7.4	5.8	13.7	18.72	.500	7.00	.719
16X 6X .500/.875T	48.45	322.2	137.2	1889.0	7.5	5.9	13.0	18.88	.500	6.00	.875
16X 8X .500/.719T	50.15	324.9	146.3	1964.3	7.6	6.0	13.4	18.72	.500	8.00	.719
16X 9X .500/.656T	50.69	325.5	149.3	1986.7	7.6	6.1	13.3	18.66	.500	9.00	.656
16X10X .500/.594T	50.80	325.3	150.2	1987.2	7.6	6.1	13.2	18.59	.500	10.00	.594
16X 7X .500/.875T	51.44	328.8	151.9	2039.6	7.7	6.2	13.4	18.88	.500	7.00	.875
16X 9X .500/.719T	52.60	329.9	158.4	2083.2	7.8	6.3	13.2	18.72	.500	9.00	.719
16X10X .500/.656T	52.90	330.0	160.2	2093.2	7.8	6.3	13.1	18.66	.500	10.00	.656
16X 8X .500/.875T	54.40	334.6	166.7	2183.9	7.9	6.5	13.1	18.88	.500	8.00	.875
16X11X .500/.656T	55.15	334.0	171.4	2198.2	7.9	6.6	12.6	18.66	.500	11.00	.656
16X11X .500/.719T	57.49	338.4	182.8	2310.9	8.0	6.8	12.6	18.72	.500	11.00	.719

0.7500 - 3/4 in.

\_\_\_\_\_

0.7500 - 3/4 in.



0.875 IN. PLATE (AREA= 26.03 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YP	YF	***** BEAM DIMENSIONS *****		SHEAR AREA		
WT/FT	ZPL	ZFL	WT/FT	INERTIA	AREA				DEPTH	WEB THICK		FLANGE WIDTH	FLANGE THICK
3X 2X .125/.188	2.55	15.4	2.2	7.9	.5	.5	3.6	.75	3.19	.125	2.00	.188	.51
4X 2X .125/.188	2.99	23.3	2.8	12.7	.7	.5	4.5	.88	4.19	.125	2.00	.188	.63
3X 3X .125/.188	3.20	18.9	2.9	10.2	.6	.5	3.5	.94	3.19	.125	3.00	.188	.51
4X 3X .125/.188	3.60	28.2	3.6	16.3	.8	.6	4.5	1.06	4.19	.125	3.00	.188	.63
4X 2X .188/.313	4.69	32.1	4.3	19.6	.8	.6	4.6	1.38	4.31	.188	2.00	.313	.97
5X 2X .188/.313	4.90	40.8	4.8	26.1	1.0	.6	5.5	1.44	5.25	.188	2.00	.250	1.15
5X 3X .188/.313	5.10	26.1	4.4	15.6	.8	.6	3.6	1.50	3.31	.188	3.00	.313	.79
5X 2X .188/.313	5.30	44.9	5.4	29.8	1.0	.7	5.5	1.56	5.31	.188	2.00	.313	1.16
6X 2X .188/.313	5.95	59.7	6.7	43.3	1.2	.7	6.5	1.75	6.31	.188	2.00	.313	1.35
6X 3X .188/.313	6.39	63.7	7.5	48.0	1.3	.8	6.4	1.88	6.25	.188	3.00	.250	1.34
5X 4X .188/.313	6.60	54.6	7.4	40.1	1.2	.7	5.4	1.94	5.25	.188	4.00	.250	1.15
4X 4X .188/.313	6.80	44.5	7.0	31.5	1.1	.7	4.5	2.00	4.31	.188	4.00	.313	.97
6X 3X .188/.313	7.00	69.7	8.7	55.4	1.4	.8	6.4	2.06	6.31	.188	3.00	.313	1.35
6X 4X .188/.313	7.24	71.3	9.1	57.7	1.4	.8	6.3	2.13	6.25	.188	4.00	.250	1.34
5X 4X .188/.313	7.45	60.6	8.8	47.5	1.3	.8	5.4	2.19	5.31	.188	4.00	.313	1.16
6X 4X .188/.313	8.09	78.2	10.7	67.6	1.5	.9	6.3	2.38	6.31	.188	4.00	.313	1.35
5X 5X .188/.313	8.50	66.6	10.5	56.0	1.4	.8	5.3	2.50	5.31	.188	5.00	.313	1.16
7X 3X .250/.313	9.15	90.0	11.5	93.3	1.7	.9	7.3	2.69	7.31	.250	3.00	.313	2.05
6X 3X .250/.313	9.55	82.0	11.8	75.3	1.6	.9	6.4	2.81	6.44	.250	3.00	.438	1.83
7X 3X .250/.313	9.79	95.7	12.8	93.1	1.8	1.0	7.3	2.88	7.38	.250	3.00	.375	2.06
8X 3X .250/.313	10.00	108.8	13.6	111.2	2.0	1.0	8.2	2.94	8.31	.250	3.00	.313	2.30
7X 4X .250/.313	10.20	98.5	13.7	98.7	1.8	1.0	7.2	3.00	7.31	.250	4.00	.313	2.05
7X 3X .250/.438	10.40	100.9	14.1	102.8	1.9	1.0	7.3	3.06	7.44	.250	3.00	.438	2.08
8X 3X .250/.375	10.64	115.1	15.1	123.8	2.1	1.1	8.2	3.13	8.38	.250	3.00	.375	2.31
9X 3X .250/.313	10.85	128.1	15.9	144.2	2.2	1.1	9.1	3.19	9.31	.250	3.00	.313	2.55
8X 4X .250/.313	11.05	118.3	16.2	131.0	2.1	1.1	8.1	3.25	8.31	.250	4.00	.313	2.30
7X 5X .250/.313	11.25	105.8	16.0	113.9	2.0	1.1	7.1	3.31	7.31	.250	5.00	.313	2.05
8X 3X .250/.438	11.25	120.7	16.6	136.0	2.2	1.1	8.2	3.31	8.44	.250	3.00	.438	2.33
9X 3X .250/.375	11.49	134.8	17.6	159.7	2.3	1.2	9.1	3.38	9.38	.250	3.00	.375	2.56
9X 4X .250/.313	11.90	138.2	18.8	168.5	2.4	1.2	9.0	3.50	9.31	.250	4.00	.313	2.55
8X 5X .250/.313	12.10	141.0	19.3	175.0	2.4	1.2	8.0	3.56	9.44	.250	3.00	.438	2.58
9X 4X .250/.313	12.10	126.1	18.8	150.1	2.3	1.2	8.0	3.56	8.31	.250	5.00	.313	2.30
9X 5X .250/.375	12.75	145.8	21.1	189.0	2.5	1.3	9.0	3.75	9.38	.250	4.00	.375	2.56
8X 5X .250/.313	12.95	146.9	21.7	182.7	2.5	1.3	8.9	3.81	9.31	.250	5.00	.313	2.55
9X 5X .250/.375	13.19	133.7	21.4	170.6	2.4	1.3	8.0	3.88	8.38	.250	5.00	.375	2.31
7X 6X .250/.438	13.40	118.8	20.6	145.8	2.2	1.2	7.1	3.94	7.44	.250	5.00	.438	2.08
8X 4X .250/.438	13.60	152.3	23.3	208.5	2.6	1.4	8.9	4.08	9.44	.250	4.00	.438	2.58
9X 5X .250/.375	14.04	154.7	24.6	217.4	2.7	1.4	8.8	4.13	9.38	.250	5.00	.375	2.56
8X 5X .250/.438	14.25	139.9	23.9	190.0	2.5	1.4	8.0	4.19	8.44	.250	5.00	.438	2.33
7X 6X .250/.375	14.45	140.6	24.5	182.9	2.5	1.4	7.9	4.25	8.38	.250	6.00	.375	2.31
8X 6X .250/.438	14.89	125.2	23.7	166.0	2.3	1.3	7.0	4.38	7.44	.250	6.00	.438	2.08
9X 5X .250/.438	15.10	161.6	27.4	211.9	2.8	1.5	8.8	4.44	9.44	.250	5.00	.438	2.58
8X 6X .250/.375	15.30	162.1	28.0	244.8	2.8	1.5	8.7	4.50	9.38	.250	6.00	.375	2.56
9X 6X .250/.375	15.74	168.0	26.1	254.1	2.9	1.5	9.7	4.63	10.38	.313	4.00	.375	3.52
8X 6X .250/.438	15.74	147.0	27.5	215.8	2.7	1.5	7.8	4.63	8.44	.250	6.00	.438	2.33

0.8750 - 7/8 in.

.875 IN. PLATE (AREA= 26.03 SQ.IN.)

***** BEAM DIMENSIONS *****															
NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****				SHEAR						
7X 7X	.250/ .438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	AREA
10X 4X	.313/ .438T	16.35	130.7	26.9	185.8	2.5	1.4	6.9	4.81	7.44	.250	7.00	.438	2.08	2.08
9X 6X	.250/ .438T	16.59	174.5	28.6	277.7	3.0	1.6	9.7	4.88	10.44	.313	4.00	.438	3.54	3.54
10X 5X	.313/ .438T	16.59	169.1	31.5	273.6	3.0	1.6	8.7	4.88	9.44	.250	6.00	.438	2.58	2.58
8X 7X	.250/ .438T	17.20	177.0	29.9	288.2	3.0	1.6	9.6	5.00	10.38	.313	5.00	.375	3.52	3.52
10X 4X	.313/ .500T	17.44	180.6	31.1	301.6	3.1	1.6	7.7	5.06	8.44	.250	7.00	.438	2.33	2.33
9X 7X	.250/ .438T	18.05	175.4	35.5	304.4	3.1	1.7	8.6	5.31	9.44	.250	7.00	.438	2.58	2.58
10X 6X	.313/ .375T	18.29	184.4	33.7	321.0	3.2	1.7	9.5	5.38	10.38	.313	6.00	.375	3.52	3.52
10X 5X	.313/ .500T	19.14	189.9	36.1	345.3	3.3	1.8	9.6	5.63	10.50	.313	5.00	.500	3.56	3.56
10X 6X	.313/ .438T	19.55	191.4	37.4	354.4	3.3	1.9	9.5	5.75	10.44	.313	6.00	.438	3.54	3.54
10X 5X	.313/ .563T	20.20	195.5	39.3	373.8	3.4	1.9	9.5	5.75	10.56	.313	5.00	.563	3.58	3.58
10X 6X	.313/ .500T	20.84	197.6	41.2	388.1	3.5	2.0	9.4	6.13	10.50	.313	6.00	.500	3.56	3.56
10X 7X	.313/ .438T	21.05	197.9	41.9	391.3	3.5	2.0	9.3	6.19	10.44	.313	7.00	.438	3.54	3.54
9X 7X	.313/ .500T	21.45	181.1	41.0	366.7	3.3	1.9	8.5	6.31	9.50	.313	7.00	.500	3.25	3.25
12X 4X	.375/ .469T	21.69	221.5	44.9	457.4	3.8	2.1	11.3	6.38	12.47	.375	4.00	.469	5.00	5.00
10X 6X	.313/ .563T	22.10	203.2	44.9	420.9	3.6	2.1	9.4	6.50	10.56	.313	6.00	.563	3.58	3.58
10X 7X	.313/ .500T	22.54	204.0	46.3	429.2	3.6	2.1	9.3	6.63	10.50	.313	7.00	.500	3.56	3.56
12X 4X	.375/ .531T	22.54	227.4	43.5	489.4	3.9	2.2	11.3	6.63	12.53	.375	4.00	.531	5.03	5.03
9X 7X	.313/ .563T	22.95	186.5	45.0	378.3	3.4	2.0	8.4	6.75	9.56	.313	7.00	.563	3.27	3.27
9X 8X	.313/ .500T	23.15	186.4	45.6	380.3	3.4	2.0	8.3	6.81	9.50	.313	8.00	.500	3.25	3.25
12X 5X	.375/ .469T	23.26	231.3	46.2	514.1	4.0	2.2	11.1	6.84	12.47	.375	5.00	.469	5.00	5.00
12X 4X	.375/ .594T	23.39	232.9	46.5	521.5	4.0	2.2	11.2	6.88	12.59	.375	4.00	.594	5.05	5.05
10X 7X	.313/ .563T	24.00	209.5	50.6	466.1	3.8	2.2	9.2	7.06	10.56	.313	7.00	.563	3.58	3.58
10X 8X	.313/ .500T	24.24	209.7	51.4	469.9	3.8	2.2	9.1	7.13	10.50	.313	8.00	.500	3.56	3.56
12X 4X	.375/ .656T	24.24	237.8	49.3	552.4	4.1	2.3	11.2	7.13	12.66	.375	4.00	.656	5.08	5.08
9X 8X	.313/ .563T	24.85	191.5	50.1	414.5	3.5	2.2	8.3	7.31	9.56	.313	8.00	.563	3.27	3.27
12X 6X	.375/ .469T	24.85	239.4	51.8	568.7	4.1	2.4	11.0	7.31	12.47	.375	6.00	.469	5.00	5.00
12X 5X	.375/ .594T	25.40	242.9	53.5	590.3	4.2	2.4	11.0	7.47	12.59	.375	5.00	.594	5.05	5.05
10X 8X	.313/ .563T	25.94	215.1	56.5	511.4	3.9	2.4	9.1	7.63	10.56	.313	8.00	.563	3.58	3.58
12X 5X	.375/ .656T	26.45	246.1	57.1	628.6	4.3	2.5	11.0	7.78	12.66	.375	5.00	.656	5.08	5.08
12X 7X	.375/ .469T	26.45	246.4	57.5	621.9	4.3	2.5	10.8	7.78	12.47	.375	7.00	.469	5.00	5.00
12X 6X	.375/ .594T	27.40	251.2	60.6	657.5	4.4	2.6	10.8	8.06	12.59	.375	6.00	.594	5.05	5.05
12X 7X	.375/ .531T	27.95	252.8	62.7	673.4	4.4	2.7	10.7	8.22	12.53	.375	7.00	.531	5.03	5.03
12X 6X	.375/ .656T	28.70	256.4	65.0	701.5	4.5	2.7	10.8	8.44	12.66	.375	6.00	.656	5.08	5.08
12X 7X	.375/ .594T	29.44	258.3	67.8	722.7	4.6	2.8	10.7	8.66	12.59	.375	7.00	.594	5.05	5.05
12X 8X	.375/ .531T	29.75	258.6	69.0	729.8	4.6	2.8	10.6	8.75	12.53	.375	8.00	.531	5.03	5.03
14X 5X	.438/ .531T	29.85	282.2	64.6	803.4	4.8	2.9	12.5	8.78	14.53	.438	5.00	.531	6.75	6.75
14X 5X	.438/ .594T	30.91	287.9	68.7	857.6	4.9	3.0	12.5	9.09	14.59	.438	5.00	.594	6.77	6.77
12X 8X	.375/ .594T	31.45	264.2	74.8	785.3	4.7	3.0	10.5	9.25	12.59	.375	8.00	.594	5.05	5.05
12X 9X	.375/ .531T	31.55	264.0	75.4	786.1	4.7	3.0	10.4	9.28	12.53	.375	9.00	.531	5.03	5.03
14X 6X	.438/ .531T	31.65	291.0	71.9	868.3	5.0	3.1	12.4	9.31	14.53	.438	6.00	.531	6.75	6.75
14X 5X	.438/ .656T	31.99	293.5	72.9	907.4	5.1	3.1	12.4	9.41	14.66	.438	5.00	.656	6.88	6.88
16X 5X	.438/ .531T	32.84	326.9	77.5	1090.4	5.5	3.2	14.1	9.66	16.53	.438	5.00	.531	7.62	7.62
14X 6X	.438/ .594T	32.95	296.9	76.9	944.6	5.1	3.2	12.3	9.69	14.59	.438	6.00	.594	6.77	6.77
14X 5X	.438/ .719T	33.05	298.4	77.0	954.8	5.2	3.2	12.4	9.72	14.72	.438	5.00	.719	6.83	6.83

0.8750 - 7/8 in.



0.875 IN. PLATE (AREA= 26.03 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		VP		VF		DEPTH		THICK		WIDTH		FLANGE		SHEAR	
		WT/FT		ZPL		ZFL															
12X 8X	.375/ .6561	33.15	269.4	80.7	840.7	4.8	3.1	10.4	9.75	12.66	.375	8.00	.656	5.00	5.00	8.00	7.00	5.00	5.00	5.00	5.00
14X 7X	.438/ .5311	33.46	298.6	79.3	965.1	5.2	3.2	12.2	9.84	14.53	.438	7.00	.531	6.75	6.75	7.00	5.00	5.00	5.00	5.00	5.00
16X 5X	.438/ .5941	33.90	333.2	82.3	1152.2	5.7	3.5	14.0	9.97	16.59	.438	5.00	.594	7.65	7.65	5.00	5.00	5.00	5.00	5.00	5.00
14X 6X	.438/ .6561	34.20	302.5	81.9	1001.5	5.3	3.3	12.2	10.06	14.66	.438	6.00	.656	6.80	6.80	6.00	6.00	6.00	6.00	6.00	6.00
16X 6X	.438/ .5311	34.65	336.5	85.9	1191.3	5.7	3.5	13.9	10.19	16.53	.438	6.00	.531	7.62	7.62	6.00	6.00	6.00	6.00	6.00	6.00
16X 5X	.438/ .6561	34.95	339.1	87.0	1213.7	5.8	3.6	14.0	10.28	16.66	.438	5.00	.656	7.68	7.68	5.00	5.00	5.00	5.00	5.00	5.00
14X 7X	.438/ .5941	34.95	304.5	85.1	1028.8	5.3	3.4	12.1	10.28	14.59	.438	7.00	.594	6.77	6.77	7.00	7.00	7.00	7.00	7.00	7.00
16X 8X	.438/ .5311	35.29	305.1	96.7	1039.6	5.3	3.4	12.0	10.38	14.53	.438	8.00	.531	6.75	6.75	8.00	8.00	8.00	8.00	8.00	8.00
16X 6X	.438/ .5941	35.90	343.0	91.6	1262.3	5.9	3.7	13.8	10.56	16.59	.438	6.00	.594	7.65	7.65	6.00	6.00	6.00	6.00	6.00	6.00
16X 5X	.438/ .7191	36.01	344.6	91.7	1274.4	5.9	3.7	13.7	10.59	16.72	.438	5.00	.719	7.71	7.71	5.00	5.00	5.00	5.00	5.00	5.00
16X 7X	.438/ .5311	36.45	344.7	94.2	1287.9	5.9	3.7	13.7	10.72	16.53	.438	7.00	.531	7.62	7.62	7.00	7.00	7.00	7.00	7.00	7.00
14X 8X	.438/ .5941	36.99	311.2	93.4	1110.9	5.5	3.6	11.9	10.88	14.53	.438	8.00	.594	6.77	6.77	8.00	8.00	8.00	8.00	8.00	8.00
14X 9X	.438/ .5311	37.09	310.9	94.0	1111.9	5.5	3.6	11.8	10.91	14.53	.438	9.00	.531	6.75	6.75	9.00	9.00	9.00	9.00	9.00	9.00
16X 7X	.438/ .5941	37.94	351.2	100.9	1368.6	6.1	3.9	13.6	11.16	16.59	.438	7.00	.594	7.65	7.65	7.00	7.00	7.00	7.00	7.00	7.00
16X 8X	.438/ .5311	38.25	351.8	102.5	1381.0	6.1	3.9	13.5	11.25	16.53	.438	8.00	.531	7.62	7.62	8.00	8.00	8.00	8.00	8.00	8.00
16X 6X	.438/ .7191	38.45	354.5	102.9	1403.6	6.1	4.0	13.6	11.31	16.72	.438	6.00	.719	7.71	7.71	6.00	6.00	6.00	6.00	6.00	6.00
16X 7X	.438/ .6561	39.41	357.3	107.4	1448.4	6.2	4.1	13.5	11.59	16.66	.438	7.00	.656	7.68	7.68	7.00	7.00	7.00	7.00	7.00	7.00
16X 8X	.438/ .5941	39.95	358.4	110.1	1470.8	6.2	4.1	13.4	11.75	16.59	.438	8.00	.594	7.65	7.65	8.00	8.00	8.00	8.00	8.00	8.00
16X 9X	.438/ .5311	40.05	358.2	110.7	1472.0	6.2	4.1	13.3	11.78	16.53	.438	9.00	.531	7.62	7.62	9.00	9.00	9.00	9.00	9.00	9.00
16X 7X	.438/ .7191	40.90	363.0	114.2	1528.2	6.3	4.2	13.4	12.03	16.72	.438	7.00	.719	7.71	7.71	7.00	7.00	7.00	7.00	7.00	7.00
16X 8X	.438/ .6561	41.65	364.6	117.7	1560.3	6.4	4.3	13.3	12.25	16.66	.438	8.00	.656	7.68	7.68	8.00	8.00	8.00	8.00	8.00	8.00
18X 5X	.500/ .6561	41.75	385.2	107.4	1641.1	6.5	4.3	15.3	12.28	18.66	.500	5.00	.656	9.77	9.77	5.00	5.00	5.00	5.00	5.00	5.00
16X 9X	.438/ .5941	41.96	364.8	119.4	1570.8	6.4	4.3	13.2	12.34	16.59	.438	9.00	.594	7.65	7.65	9.00	9.00	9.00	9.00	9.00	9.00
16X 5X	.500/ .8751	42.09	356.5	107.6	1667.7	6.2	4.1	13.6	12.38	16.88	.500	5.00	.875	8.88	8.88	5.00	5.00	5.00	5.00	5.00	5.00
18X 5X	.500/ .5941	42.70	389.4	112.7	1701.2	6.6	4.4	15.1	12.56	18.59	.500	6.00	.594	9.73	9.73	6.00	6.00	6.00	6.00	6.00	6.00
18X 6X	.500/ .7191	42.81	390.9	112.7	1713.7	6.7	4.4	15.2	12.59	18.72	.500	5.00	.719	9.80	9.80	5.00	5.00	5.00	5.00	5.00	5.00
14X 10X	.438/ .6561	43.15	327.3	118.0	1347.5	5.9	4.1	11.4	12.69	14.66	.438	10.00	.656	6.80	6.80	10.00	10.00	10.00	10.00	10.00	10.00
16X 8X	.438/ .7191	43.35	370.1	125.3	1647.2	6.5	4.5	13.1	12.75	16.72	.438	8.00	.719	7.71	7.71	8.00	8.00	8.00	8.00	8.00	8.00
16X 9X	.438/ .6561	43.89	370.8	127.9	1667.9	6.5	4.5	13.0	12.91	16.66	.438	9.00	.656	7.68	7.68	9.00	9.00	9.00	9.00	9.00	9.00
18X 6X	.500/ .6561	44.00	395.7	118.9	1786.0	6.8	4.5	15.0	12.94	18.66	.500	6.00	.656	9.77	9.77	6.00	6.00	6.00	6.00	6.00	6.00
16X 10X	.438/ .5941	44.00	370.5	128.8	1668.9	6.5	4.5	13.0	12.94	16.59	.438	10.00	.594	7.65	7.65	10.00	10.00	10.00	10.00	10.00	10.00
14X 11X	.438/ .6561	45.36	331.6	126.9	1825.6	6.0	4.3	11.2	13.34	14.66	.438	11.00	.656	6.80	6.80	11.00	11.00	11.00	11.00	11.00	11.00
16X 9X	.438/ .7191	45.80	376.4	136.6	1763.8	6.7	4.7	12.9	13.47	16.72	.438	9.00	.719	7.71	7.71	9.00	9.00	9.00	9.00	9.00	9.00
16X 10X	.438/ .6561	46.10	376.4	138.1	1772.0	6.7	4.7	12.8	13.56	16.66	.438	10.00	.656	7.68	7.68	10.00	10.00	10.00	10.00	10.00	10.00
18X 7X	.500/ .7191	47.70	410.7	137.7	2020.6	7.1	4.9	14.7	14.03	18.72	.500	7.00	.719	9.80	9.80	7.00	7.00	7.00	7.00	7.00	7.00
18X 6X	.500/ .8751	48.45	414.8	140.8	2077.0	7.2	5.0	14.7	14.25	18.88	.500	6.00	.875	9.80	9.80	6.00	6.00	6.00	6.00	6.00	6.00
18X 8X	.500/ .7191	50.15	418.7	150.1	2164.9	7.3	5.2	14.4	14.75	18.72	.500	8.00	.719	9.80	9.80	8.00	8.00	8.00	8.00	8.00	8.00
18X 9X	.500/ .6561	50.69	419.6	153.1	2191.4	7.3	5.2	14.3	14.91	18.66	.500	9.00	.656	9.77	9.77	9.00	9.00	9.00	9.00	9.00	9.00
18X 10X	.500/ .5941	50.80	419.3	154.0	2192.4	7.3	5.2	14.2	14.94	18.59	.500	10.00	.594	9.73	9.73	10.00	10.00	10.00	10.00	10.00	10.00
18X 7X	.500/ .8751	51.44	423.9	155.9	2251.4	7.4	5.3	14.4	15.13	18.88	.500	7.00	.875	9.88	9.88	7.00	7.00	7.00	7.00	7.00	7.00
18X 9X	.500/ .7191	52.60	425.5	162.4	2303.4	7.4	5.4	14.2	15.47	18.72	.500	8.00	.719	9.80	9.80	8.00	8.00	8.00	8.00	8.00	8.00
18X 10X	.500/ .6561	52.90	425.7	164.3	2315.4	7.5	5.4	14.1	15.56	18.66	.500	9.00	.656	9.77	9.77	9.00	9.00	9.00	9.00	9.00	9.00
18X 8X	.500/ .8751	54.40	431.9	171.0	2419.8	7.6	5.6	14.2	16.00	18.88	.500	8.00	.875	9.88	9.88	8.00	8.00	8.00	8.00	8.00	8.00
18X 11X	.500/ .6561	55.15	431.3	175.7	2438.4	7.6	5.7	13.9	16.22	18.66	.500	11.00	.656	9.77	9.77	11.00	11.00	11.00	11.00	11.00	11.00
18X 11X	.500/ .7191	57.49	437.3	187.4	2570.8	7.7	5.9	13.7	16.91	18.72	.500	11.00	.719	9.80	9.80	11.00	11.00	11.00	11.00	11.00	11.00

0.8750 - 7/8 in.

0.875 IN. PLATE (AREA= 26.03 SQ.IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE			WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	FLANGE THICK	AREA					
16X12X	.500/	.719T	59.94	442.2	139.8	2696.2	7.9	6.1	13.5	17.63	18.72	.500	12.00	.719	.500	9.00					
18X10X	.500/	.875T	60.35	444.8	201.0	2734.8	7.9	6.1	13.6	17.75	18.88	.500	10.00	.875	.500	9.00					
21X 8X	.625/	.875T	68.44	509.3	220.0	3496.1	8.7	6.9	15.9	20.13	21.88	.625	8.00	.875	.625	14.22					
21X10X	.625/	.750T	70.14	512.8	230.7	3599.6	8.8	7.0	15.6	20.63	21.75	.625	10.00	.750	.625	14.14					
21X 9X	.625/	.875T	71.40	517.6	237.2	3701.6	8.9	7.2	15.6	21.00	21.88	.625	9.00	.875	.625	14.22					
21X11X	.625/	.750T	72.69	519.5	245.6	3773.3	8.9	7.3	15.4	21.38	21.75	.625	11.00	.750	.625	14.14					
21X10X	.625/	.875T	74.39	525.0	254.7	3901.9	9.0	7.4	15.3	21.88	21.88	.625	10.00	.875	.625	14.22					
21X 9X	.625/	1.125T	79.05	537.9	279.8	4233.9	9.3	7.9	15.1	23.25	22.13	.625	9.00	1.125	.625	14.38					
21X12X	.625/	.875T	80.34	537.3	288.7	4273.6	9.3	8.0	14.8	23.63	21.88	.625	12.00	.875	.625	14.22					
24X 9X	.688/	.875T	82.99	598.9	289.7	5028.6	10.0	8.4	17.4	24.38	24.88	.688	9.00	.875	.688	17.72					
21X13X	.625/	.875T	83.30	542.7	305.9	4451.9	9.4	8.2	14.6	24.50	21.88	.625	13.00	.875	.625	14.22					
24X10X	.688/	.875T	85.85	607.3	308.9	5273.8	10.1	8.7	17.1	25.25	24.88	.688	10.00	.875	.688	17.72					
21X14X	.625/	.875T	86.29	547.5	323.0	4622.6	9.5	8.4	14.3	25.38	21.88	.625	14.00	.875	.625	14.22					
24X 8X	.688/	1.125T	86.70	612.3	312.3	5370.6	10.2	8.8	17.2	25.50	25.13	.688	8.00	1.125	.688	17.69					
24X11X	.688/	.875T	88.84	614.9	328.2	5511.1	10.3	9.0	16.8	26.13	24.88	.688	11.00	.875	.688	17.72					
24X 9X	.688/	1.125T	90.54	622.0	337.3	5687.2	10.4	9.1	16.9	26.63	25.13	.688	9.00	1.125	.688	17.09					
24X12X	.688/	.875T	91.80	622.0	347.6	5743.3	10.4	9.2	16.5	27.00	24.88	.688	12.00	.875	.688	17.72					
24X13X	.688/	.875T	94.79	628.3	367.0	5966.9	10.5	9.5	16.3	27.88	24.88	.688	13.00	.875	.688	17.72					
24X11X	.688/	1.125T	98.19	638.0	386.3	6257.3	10.7	9.8	16.2	28.88	25.13	.688	11.00	1.125	.688	17.09					
27X 8X	.750/	1.125T	99.45	698.9	373.6	7061.2	11.3	10.1	18.9	29.25	28.13	.750	8.00	1.125	.750	21.75					
27X11X	.750/	.875T	101.59	702.3	391.1	7223.8	11.4	10.3	18.5	29.88	27.88	.750	11.00	.875	.750	21.57					
27X 9X	.750/	1.125T	103.29	709.9	401.0	7432.1	11.5	10.5	18.5	30.38	28.13	.750	9.00	1.125	.750	21.75					
27X12X	.750/	.875T	104.55	710.4	412.5	7504.1	11.5	10.6	18.2	30.75	27.88	.750	12.00	.875	.750	21.57					
27X10X	.750/	1.125T	107.10	719.7	428.1	7705.5	11.6	10.8	18.2	31.50	28.13	.750	10.00	1.125	.750	21.75					
27X11X	.750/	1.125T	110.94	728.6	455.3	8127.5	11.8	11.2	17.9	32.63	28.13	.750	11.00	1.125	.750	21.75					
27X 9X	.875/	1.375T	122.40	741.6	470.6	8422.9	11.7	11.4	17.9	36.00	28.38	.875	9.00	1.375	.875	25.60					
30X10X	.875/	1.375T	136.00	845.2	574.6	11033.6	12.9	13.1	19.2	40.00	31.38	.875	10.00	1.375	.875	28.22					
30X13X	.875/	1.125T	138.99	848.8	601.4	11265.3	13.0	13.3	18.7	40.88	31.38	.875	13.00	1.125	.875	28.00					
30X11X	.875/	1.375T	140.69	855.8	610.6	11494.0	13.1	13.4	18.6	41.38	31.38	.875	11.00	1.375	.875	28.22					
30X14X	.875/	1.125T	142.80	857.0	631.1	11631.9	13.1	13.6	18.4	42.00	31.38	.875	14.00	1.125	.875	28.00					
30X12X	.875/	1.375T	154.70	882.4	718.9	12777.2	13.4	14.5	17.6	45.50	31.38	.875	14.00	1.375	.875	28.22					
33X10X1	.000/	1.500T	163.20	971.0	707.8	14481.8	14.0	14.9	20.5	48.00	34.50	1.000	10.00	1.500	1.000	35.38					
33X13X1	.000/	1.125T	172.14	1065.4	713.2	14492.2	14.0	14.9	20.3	48.13	34.38	1.000	11.00	1.375	1.000	35.26					
33X13X1	.000/	1.125T	172.14	1065.4	713.2	14492.2	14.0	14.9	20.3	48.13	34.38	1.000	11.00	1.375	1.000	35.26					
33X13X1	.000/	1.375T	172.99	992.2	791.0	15516.3	14.2	15.6	19.6	50.88	34.38	1.000	13.00	1.375	1.000	35.26					
36X11X1	.000/	1.375T	173.84	1073.6	798.7	17520.1	15.1	16.3	21.9	51.13	37.38	1.000	11.00	1.375	1.000	38.26					
36X10X1	.000/	1.750T	181.90	1100.2	864.0	18692.8	15.3	17.0	21.6	53.50	37.75	1.000	10.00	1.750	1.000	38.63					
33X16X1	.000/	1.375T	187.00	1019.2	907.3	16922.3	14.5	16.6	18.7	55.00	34.38	1.000	16.00	1.375	1.000	35.26					

0.8750 - 7/8 in.



1.000 IN. PLATE (AREA= 34.00 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			R	YF	YF	***** BEAM DIMENSIONS *****			SHEAR AREA
3X 2X	4X 2X	5X 2X	6X 2X	7X 2X				AREA	DEPTH	THICK	
3X 3X	4X 3X	5X 3X	6X 3X	7X 3X	8X 3X	9X 3X	10X 3X	WIDTH	THICK	FLANGE	THICK
3X 4X	4X 4X	5X 4X	6X 4X	7X 4X	8X 4X	9X 4X	10X 4X	3.00	3.00	3.00	3.00
3X 5X	4X 5X	5X 5X	6X 5X	7X 5X	8X 5X	9X 5X	10X 5X	4.00	4.00	4.00	4.00
3X 6X	4X 6X	5X 6X	6X 6X	7X 6X	8X 6X	9X 6X	10X 6X	5.00	5.00	5.00	5.00
3X 7X	4X 7X	5X 7X	6X 7X	7X 7X	8X 7X	9X 7X	10X 7X	6.00	6.00	6.00	6.00
3X 8X	4X 8X	5X 8X	6X 8X	7X 8X	8X 8X	9X 8X	10X 8X	7.00	7.00	7.00	7.00
3X 9X	4X 9X	5X 9X	6X 9X	7X 9X	8X 9X	9X 9X	10X 9X	8.00	8.00	8.00	8.00
3X 10X	4X 10X	5X 10X	6X 10X	7X 10X	8X 10X	9X 10X	10X 10X	9.00	9.00	9.00	9.00
3X 11X	4X 11X	5X 11X	6X 11X	7X 11X	8X 11X	9X 11X	10X 11X	10.00	10.00	10.00	10.00
3X 12X	4X 12X	5X 12X	6X 12X	7X 12X	8X 12X	9X 12X	10X 12X	11.00	11.00	11.00	11.00
3X 13X	4X 13X	5X 13X	6X 13X	7X 13X	8X 13X	9X 13X	10X 13X	12.00	12.00	12.00	12.00
3X 14X	4X 14X	5X 14X	6X 14X	7X 14X	8X 14X	9X 14X	10X 14X	13.00	13.00	13.00	13.00
3X 15X	4X 15X	5X 15X	6X 15X	7X 15X	8X 15X	9X 15X	10X 15X	14.00	14.00	14.00	14.00
3X 16X	4X 16X	5X 16X	6X 16X	7X 16X	8X 16X	9X 16X	10X 16X	15.00	15.00	15.00	15.00
3X 17X	4X 17X	5X 17X	6X 17X	7X 17X	8X 17X	9X 17X	10X 17X	16.00	16.00	16.00	16.00
3X 18X	4X 18X	5X 18X	6X 18X	7X 18X	8X 18X	9X 18X	10X 18X	17.00	17.00	17.00	17.00
3X 19X	4X 19X	5X 19X	6X 19X	7X 19X	8X 19X	9X 19X	10X 19X	18.00	18.00	18.00	18.00
3X 20X	4X 20X	5X 20X	6X 20X	7X 20X	8X 20X	9X 20X	10X 20X	19.00	19.00	19.00	19.00
3X 21X	4X 21X	5X 21X	6X 21X	7X 21X	8X 21X	9X 21X	10X 21X	20.00	20.00	20.00	20.00
3X 22X	4X 22X	5X 22X	6X 22X	7X 22X	8X 22X	9X 22X	10X 22X	21.00	21.00	21.00	21.00
3X 23X	4X 23X	5X 23X	6X 23X	7X 23X	8X 23X	9X 23X	10X 23X	22.00	22.00	22.00	22.00
3X 24X	4X 24X	5X 24X	6X 24X	7X 24X	8X 24X	9X 24X	10X 24X	23.00	23.00	23.00	23.00
3X 25X	4X 25X	5X 25X	6X 25X	7X 25X	8X 25X	9X 25X	10X 25X	24.00	24.00	24.00	24.00
3X 26X	4X 26X	5X 26X	6X 26X	7X 26X	8X 26X	9X 26X	10X 26X	25.00	25.00	25.00	25.00
3X 27X	4X 27X	5X 27X	6X 27X	7X 27X	8X 27X	9X 27X	10X 27X	26.00	26.00	26.00	26.00
3X 28X	4X 28X	5X 28X	6X 28X	7X 28X	8X 28X	9X 28X	10X 28X	27.00	27.00	27.00	27.00
3X 29X	4X 29X	5X 29X	6X 29X	7X 29X	8X 29X	9X 29X	10X 29X	28.00	28.00	28.00	28.00
3X 30X	4X 30X	5X 30X	6X 30X	7X 30X	8X 30X	9X 30X	10X 30X	29.00	29.00	29.00	29.00
3X 31X	4X 31X	5X 31X	6X 31X	7X 31X	8X 31X	9X 31X	10X 31X	30.00	30.00	30.00	30.00
3X 32X	4X 32X	5X 32X	6X 32X	7X 32X	8X 32X	9X 32X	10X 32X	31.00	31.00	31.00	31.00
3X 33X	4X 33X	5X 33X	6X 33X	7X 33X	8X 33X	9X 33X	10X 33X	32.00	32.00	32.00	32.00
3X 34X	4X 34X	5X 34X	6X 34X	7X 34X	8X 34X	9X 34X	10X 34X	33.00	33.00	33.00	33.00
3X 35X	4X 35X	5X 35X	6X 35X	7X 35X	8X 35X	9X 35X	10X 35X	34.00	34.00	34.00	34.00
3X 36X	4X 36X	5X 36X	6X 36X	7X 36X	8X 36X	9X 36X	10X 36X	35.00	35.00	35.00	35.00
3X 37X	4X 37X	5X 37X	6X 37X	7X 37X	8X 37X	9X 37X	10X 37X	36.00	36.00	36.00	36.00
3X 38X	4X 38X	5X 38X	6X 38X	7X 38X	8X 38X	9X 38X	10X 38X	37.00	37.00	37.00	37.00
3X 39X	4X 39X	5X 39X	6X 39X	7X 39X	8X 39X	9X 39X	10X 39X	38.00	38.00	38.00	38.00
3X 40X	4X 40X	5X 40X	6X 40X	7X 40X	8X 40X	9X 40X	10X 40X	39.00	39.00	39.00	39.00
3X 41X	4X 41X	5X 41X	6X 41X	7X 41X	8X 41X	9X 41X	10X 41X	40.00	40.00	40.00	40.00
3X 42X	4X 42X	5X 42X	6X 42X	7X 42X	8X 42X	9X 42X	10X 42X	41.00	41.00	41.00	41.00
3X 43X	4X 43X	5X 43X	6X 43X	7X 43X	8X 43X	9X 43X	10X 43X	42.00	42.00	42.00	42.00
3X 44X	4X 44X	5X 44X	6X 44X	7X 44X	8X 44X	9X 44X	10X 44X	43.00	43.00	43.00	43.00
3X 45X	4X 45X	5X 45X	6X 45X	7X 45X	8X 45X	9X 45X	10X 45X	44.00	44.00	44.00	44.00
3X 46X	4X 46X	5X 46X	6X 46X	7X 46X	8X 46X	9X 46X	10X 46X	45.00	45.00	45.00	45.00
3X 47X	4X 47X	5X 47X	6X 47X	7X 47X	8X 47X	9X 47X	10X 47X	46.00	46.00	46.00	46.00
3X 48X	4X 48X	5X 48X	6X 48X	7X 48X	8X 48X	9X 48X	10X 48X	47.00	47.00	47.00	47.00
3X 49X	4X 49X	5X 49X	6X 49X	7X 49X	8X 49X	9X 49X	10X 49X	48.00	48.00	48.00	48.00
3X 50X	4X 50X	5X 50X	6X 50X	7X 50X	8X 50X	9X 50X	10X 50X	49.00	49.00	49.00	49.00
3X 51X	4X 51X	5X 51X	6X 51X	7X 51X	8X 51X	9X 51X	10X 51X	50.00	50.00	50.00	50.00
3X 52X	4X 52X	5X 52X	6X 52X	7X 52X	8X 52X	9X 52X	10X 52X	51.00	51.00	51.00	51.00
3X 53X	4X 53X	5X 53X	6X 53X	7X 53X	8X 53X	9X 53X	10X 53X	52.00	52.00	52.00	52.00
3X 54X	4X 54X	5X 54X	6X 54X	7X 54X	8X 54X	9X 54X	10X 54X	53.00	53.00	53.00	53.00
3X 55X	4X 55X	5X 55X	6X 55X	7X 55X	8X 55X	9X 55X	10X 55X	54.00	54.00	54.00	54.00
3X 56X	4X 56X	5X 56X	6X 56X	7X 56X	8X 56X	9X 56X	10X 56X	55.00	55.00	55.00	55.00
3X 57X	4X 57X	5X 57X	6X 57X	7X 57X	8X 57X	9X 57X	10X 57X	56.00	56.00	56.00	56.00
3X 58X	4X 58X	5X 58X	6X 58X	7X 58X	8X 58X	9X 58X	10X 58X	57.00	57.00	57.00	57.00
3X 59X	4X 59X	5X 59X	6X 59X	7X 59X	8X 59X	9X 59X	10X 59X	58.00	58.00	58.00	58.00
3X 60X	4X 60X	5X 60X	6X 60X	7X 60X	8X 60X	9X 60X	10X 60X	59.00	59.00	59.00	59.00
3X 61X	4X 61X	5X 61X	6X 61X	7X 61X	8X 61X	9X 61X	10X 61X	60.00	60.00	60.00	60.00
3X 62X	4X 62X	5X 62X	6X 62X	7X 62X	8X 62X	9X 62X	10X 62X	61.00	61.00	61.00	61.00
3X 63X	4X 63X	5X 63X	6X 63X	7X 63X	8X 63X	9X 63X	10X 63X	62.00	62.00	62.00	62.00
3X 64X	4X 64X	5X 64X	6X 64X	7X 64X	8X 64X	9X 64X	10X 64X	63.00	63.00	63.00	63.00
3X 65X	4X 65X	5X 65X	6X 65X	7X 65X	8X 65X	9X 65X	10X 65X	64.00	64.00	64.00	64.00
3X 66X	4X 66X	5X 66X	6X 66X	7X 66X	8X 66X	9X 66X	10X 66X	65.00	65.00	65.00	65.00
3X 67X	4X 67X	5X 67X	6X 67X	7X 67X	8X 67X	9X 67X	10X 67X	66.00	66.00	66.00	66.00
3X 68X	4X 68X	5X 68X	6X 68X	7X 68X	8X 68X	9X 68X	10X 68X	67.00	67.00	67.00	67.00
3X 69X	4X 69X	5X 69X	6X 69X	7X 69X	8X 69X	9X 69X	10X 69X	68.00	68.00	68.00	68.00
3X 70X	4X 70X	5X 70X	6X 70X	7X 70X	8X 70X	9X 70X	10X 70X	69.00	69.00	69.00	69.00
3X 71X	4X 71X	5X 71X	6X 71X	7X 71X	8X 71X	9X 71X	10X 71X	70.00	70.00	70.00	70.00
3X 72X	4X 72X	5X 72X	6X 72X	7X 72X	8X 72X	9X 72X	10X 72X	71.00	71.00	71.00	71.00
3X 73X	4X 73X	5X 73X	6X 73X	7X 73X	8X 73X	9X 73X	10X 73X	72.00	72.00	72.00	72.00
3X 74X	4X 74X	5X 74X	6X 74X	7X 74X	8X 74X	9X 74X	10X 74X	73.00	73.00	73.00	73.00
3X 75X	4X 75X	5X 75X	6X 75X	7X 75X	8X 75X	9X 75X	10X 75X	74.00	74.00	74.00	74.00
3X 76X	4X 76X	5X 76X	6X 76X	7X 76X	8X 76X	9X 76X	10X 76X	75.00	75.00	75.00	75.00
3X 77X	4X 77X	5X 77X	6X 77X	7X 77X	8X 77X	9X 77X	10X 77X	76.00	76.00	76.00	76.00
3X 78X	4X 78X	5X 78X	6X 78X	7X 78X	8X 78X	9X 78X	10X 78X	77.00	77.00	77.00	77.00
3X 79X	4X 79X	5X 79X	6X 79X	7X 79X	8X 79X	9X 79X	10X 79X	78.00	78.00	78.00	78.00
3X 80X	4X 80X	5X 80X	6X 80X	7X 80X	8X 80X	9X 80X	10X 80X	79.00	79.00	79.00	79.00
3X 81X	4X 81X	5X 81X	6X 81X	7X 81X	8X 81X	9X 81X	10X 81X	80.00	80.00	80.00	80.00
3X 82X	4X 82X	5X 82X	6X 82X	7X 82X	8X 82X	9X 82X	10X 82X	81.00	81.00	81.00	81.00
3X 83X	4X 83X	5X 83X	6X 83X	7X 83X	8X 83X	9X 83X	10X 83X	82.00	82.00	82.00	82.00
3X 84X	4X 84X	5X 84X	6X 84X	7X 84X	8X 84X	9X 84X	10X 84X	83.00	83.00	83.00	83.00
3X 85X	4X 85X	5X 85X	6X 85X	7X 85X	8X 85X	9X 85X	10X 85X	84.00	84.00	84.00	84.00
3X 86X	4X 86X	5X 86X	6X 86X	7X 86X	8X 86X	9X 86X	10X 86X	85.00	85.00	85.00	85.00
3X 87X	4X 87X	5X 87X	6X 87X	7X 87X	8X 87X	9X 87X	10X 87X	86.00	86.00	86.00	86.00
3X 88X	4X 88X	5X 88X	6X 88X	7X 88X	8X 88X	9X 88X	10X 88X	87.00	87.00	87.00	87.00
3X 89X	4X 89X	5X 89X	6X 89X	7X 89X	8X 89X	9X 89X	10X 89X	88.00	88.00	88.00	88.00
3X 90X	4X 90X	5X 90X	6X 90X	7X 90X	8X 90X	9X 90X	10X 90X	89.00	89.00	89.00	89.00
3X 91X	4X 91X	5X 91X	6X 91X	7X 91X	8X 91X	9X 91X	10X 91X	90.00	90.00	90.00	90.00
3X 92X	4X 92X	5X 92X	6X 92X	7X 92X	8X 92X	9X 92X	10X 92X	91			

1.000 IN. PLATE (AREA= 34.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
7X 7X	250/ .438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	THICK	THICK	AREA
7X 7X	250/ .438T	16.35	152.3	27.5	196.4	2.2	1.3	7.2	4.81	7.44	.250	7.00	.438	.438	.438	2.11
10X 4X	313/ .438T	16.59	204.4	29.1	291.2	2.7	1.4	10.0	4.88	10.44	.313	4.00	.438	.438	.438	3.58
9X 6X	250/ .438T	16.59	198.9	32.0	287.6	2.7	1.4	9.0	4.88	9.44	.250	6.00	.438	.438	.438	2.61
10X 5X	313/ .375T	17.00	207.8	30.5	302.4	2.8	1.5	9.9	5.00	10.38	.313	5.00	.375	.375	.375	3.56
8X 7X	250/ .438T	17.20	179.7	31.6	253.9	2.5	1.4	8.0	5.06	8.44	.250	7.00	.438	.438	.438	2.36
10X 4X	313/ .500T	17.44	212.5	31.6	316.6	2.8	1.5	10.0	5.13	10.50	.313	4.00	.500	.500	.500	3.60
9X 7X	250/ .438T	18.05	207.8	36.8	320.7	2.9	1.5	8.9	5.31	9.44	.250	7.00	.438	.438	.438	2.61
10X 6X	313/ .375T	18.29	218.0	34.3	337.4	2.9	1.5	9.8	5.38	10.38	.313	6.00	.375	.375	.375	3.56
10X 5X	313/ .500T	19.14	225.4	36.7	363.4	3.0	1.6	9.9	5.53	10.50	.313	5.00	.500	.500	.500	3.60
10X 6X	313/ .438T	19.55	227.5	38.1	373.1	3.1	1.6	9.8	5.75	10.44	.313	6.00	.438	.438	.438	3.58
10X 5X	313/ .563T	20.20	233.1	39.9	393.9	3.1	1.7	9.9	5.94	10.56	.313	5.00	.563	.563	.563	3.62
10X 6X	313/ .500T	20.84	236.3	41.9	409.4	3.2	1.7	9.8	6.13	10.50	.313	6.00	.500	.500	.500	3.60
10X 7X	313/ .438T	21.05	236.7	42.6	412.9	3.2	1.7	9.7	6.19	10.44	.313	7.00	.438	.438	.438	3.58
9X 7X	313/ .500T	21.45	216.5	41.7	366.9	3.0	1.7	8.8	6.31	9.58	.313	7.00	.500	.500	.500	3.29
12X 4X	375/ .469T	21.69	264.9	41.3	481.1	3.5	1.8	11.7	6.38	12.47	.375	4.00	.469	.469	.469	5.05
10X 6X	313/ .563T	22.10	244.0	45.7	444.7	3.3	1.8	9.7	6.58	10.56	.313	6.00	.563	.563	.563	3.62
10X 7X	313/ .500T	22.54	245.4	47.0	453.9	3.3	1.8	9.7	6.63	10.50	.313	7.00	.500	.500	.500	3.60
12X 4X	375/ .531T	22.54	272.9	44.3	515.3	3.6	1.9	11.6	6.63	12.53	.375	4.00	.531	.531	.531	5.07
9X 7X	313/ .563T	22.95	224.1	45.7	401.2	3.1	1.8	8.8	6.75	9.56	.313	7.00	.563	.563	.563	3.31
9X 8X	313/ .500T	23.15	224.1	46.4	403.4	3.1	1.8	8.7	6.81	9.50	.313	8.00	.500	.500	.500	3.29
12X 5X	375/ .469T	23.26	278.3	47.0	541.8	3.6	1.9	11.5	6.84	12.47	.375	5.00	.469	.469	.469	5.05
12X 4X	375/ .594T	23.39	280.3	47.3	549.7	3.7	2.0	11.6	6.88	12.59	.375	4.00	.594	.594	.594	5.10
10X 7X	313/ .563T	24.00	253.2	51.4	494.0	3.5	2.0	9.6	7.06	10.56	.313	7.00	.563	.563	.563	3.62
10X 8X	313/ .500T	24.24	253.5	52.2	498.2	3.5	2.0	9.5	7.13	10.50	.313	8.00	.500	.500	.500	3.60
12X 4X	375/ .656T	24.24	287.0	50.1	582.9	3.8	2.0	11.6	7.13	12.66	.375	4.00	.656	.656	.656	5.12
9X 8X	313/ .563T	24.85	231.4	50.9	440.8	3.3	1.9	8.7	7.31	9.56	.313	8.00	.563	.563	.563	3.31
12X 6X	375/ .469T	24.85	289.5	52.7	600.7	3.8	2.1	11.4	7.31	12.47	.375	6.00	.469	.469	.469	5.05
12X 5X	375/ .594T	25.40	294.1	54.4	623.9	3.9	2.1	11.5	7.47	12.59	.375	5.00	.594	.594	.594	5.10
10X 8X	313/ .563T	25.94	261.3	57.3	543.5	3.6	2.1	9.5	7.63	10.56	.313	8.00	.563	.563	.563	3.62
12X 5X	375/ .656T	26.45	301.4	58.1	665.3	4.0	2.2	11.5	7.78	12.66	.375	5.00	.656	.656	.656	5.12
12X 7X	375/ .469T	26.45	299.2	58.4	658.4	4.0	2.2	11.3	7.78	12.47	.375	7.00	.469	.469	.469	5.05
12X 6X	375/ .594T	27.40	305.9	61.6	696.8	4.1	2.3	11.3	8.06	12.59	.375	6.00	.594	.594	.594	5.10
12X 7X	375/ .531T	27.95	308.1	63.7	714.3	4.1	2.3	11.2	8.22	12.53	.375	7.00	.531	.531	.531	5.07
12X 6X	375/ .656T	28.70	313.1	66.0	744.9	4.2	2.4	11.3	8.44	12.66	.375	6.00	.656	.656	.656	5.12
12X 7X	375/ .594T	28.44	315.8	68.8	768.2	4.2	2.4	11.2	8.66	12.59	.375	7.00	.594	.594	.594	5.10
12X 8X	375/ .531T	29.75	316.4	70.1	776.1	4.3	2.5	11.1	8.75	12.53	.375	8.00	.531	.531	.531	5.07
14X 5X	438/ .531T	29.85	344.2	65.7	857.3	4.5	2.5	13.0	8.78	14.53	.438	5.00	.531	.531	.531	6.00
14X 5X	438/ .594T	30.91	352.0	69.9	909.6	4.6	2.6	13.0	9.09	14.59	.438	5.00	.594	.594	.594	6.03
12X 8X	375/ .594T	31.45	324.3	76.0	837.1	4.4	2.6	11.0	9.25	12.59	.375	8.00	.594	.594	.594	5.10
12X 9X	375/ .531T	31.55	324.1	76.6	838.1	4.4	2.6	10.9	9.28	12.53	.375	9.00	.531	.531	.531	5.07
14X 6X	438/ .531T	31.65	356.2	73.2	943.0	4.7	2.6	12.9	9.31	14.53	.438	6.00	.531	.531	.531	6.00
14X 5X	438/ .656T	31.99	359.5	74.2	963.6	4.7	2.7	13.0	9.41	14.66	.438	5.00	.656	.656	.656	6.06
16X 5X	438/ .531T	32.84	401.1	79.0	1156.4	5.1	2.9	14.6	9.66	16.53	.438	5.00	.531	.531	.531	7.60
14X 6X	438/ .594T	32.95	364.2	78.3	1004.4	4.8	2.8	12.8	9.69	14.59	.438	6.00	.594	.594	.594	6.03
14X 5X	438/ .719T	33.05	366.2	78.4	1015.3	4.8	2.8	12.9	9.72	14.72	.438	5.00	.719	.719	.719	6.09

1.0000 - 1 in.



1.000 IN. PLATE (AREA= 34.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL							WEB THICK	WIDTH	FLANGE THICK	
12X 8X .375/.656T	33.15	331.6	82.0	898.2	4.5	2.7	11.0	9.75	12.66	.375	8.00	.656	5.12
14X 7X .438/.531T	33.46	366.7	90.7	1026.9	4.8	2.8	12.7	9.84	14.53	.438	7.00	.531	6.80
16X 5X .438/.594T	33.30	409.5	93.8	1223.5	5.3	3.0	14.6	9.97	16.59	.438	5.00	.594	7.70
14X 6X .438/.656T	34.20	371.9	83.4	1066.5	4.9	2.9	12.8	10.06	14.66	.438	6.00	.656	6.86
16X 6X .438/.531T	34.65	414.2	87.5	1266.2	5.4	3.1	14.5	10.19	16.53	.438	6.00	.531	7.68
16X 5X .438/.656T	34.95	417.5	88.6	1230.3	5.4	3.1	14.6	10.28	16.66	.438	5.00	.656	7.74
14X 7X .438/.594T	34.95	374.8	86.6	1096.8	5.0	2.9	12.7	10.28	14.59	.438	7.00	.594	6.83
14X 8X .438/.531T	35.29	375.7	88.2	1108.8	5.0	3.0	12.6	10.38	14.53	.438	8.00	.531	6.80
16X 6X .438/.594T	35.90	422.8	93.2	1343.7	5.5	3.2	14.4	10.56	16.59	.438	6.00	.594	7.70
16X 5X .438/.531T	36.01	424.8	93.4	1356.6	5.5	3.2	14.5	10.59	16.72	.438	5.00	.531	7.76
16X 7X .438/.531T	36.45	425.3	95.9	1371.9	5.5	3.2	14.3	10.72	16.53	.438	7.00	.531	7.68
14X 8X .438/.594T	36.99	384.1	95.0	1187.3	5.1	3.1	12.5	10.88	14.59	.438	8.00	.594	6.83
14X 9X .438/.531T	37.09	383.8	95.6	1188.6	5.1	3.1	12.4	10.91	14.53	.438	9.00	.531	6.80
16X 7X .438/.594T	37.94	434.1	102.7	1460.5	5.7	3.4	14.2	11.16	16.59	.438	7.00	.594	7.70
16X 8X .438/.531T	38.25	435.0	104.3	1474.3	5.7	3.4	14.1	11.25	16.53	.438	8.00	.531	7.68
16X 6X .438/.719T	38.45	438.5	104.8	1498.6	5.8	3.4	14.3	11.31	16.72	.438	6.00	.719	7.76
16X 7X .438/.656T	39.41	442.4	109.3	1548.3	5.8	3.5	14.2	11.59	16.66	.438	7.00	.656	7.74
16X 8X .438/.594T	39.95	444.0	112.0	1573.3	5.9	3.5	14.0	11.75	16.59	.438	8.00	.594	7.70
16X 9X .438/.531T	40.05	443.7	112.6	1574.9	5.9	3.5	14.0	11.78	16.53	.438	9.00	.531	7.68
16X 7X .438/.719T	40.90	450.1	116.2	1636.5	6.0	3.6	14.1	12.03	16.72	.438	7.00	.719	7.76
16X 8X .438/.656T	41.65	452.4	119.8	1672.4	6.0	3.7	14.0	12.25	16.66	.438	8.00	.656	7.74
18X 5X .500/.656T	41.75	475.9	109.7	1752.2	6.2	3.7	16.0	12.28	18.66	.500	5.00	.656	9.83
16X 9X .438/.594T	41.96	452.8	121.4	1684.3	6.0	3.7	13.9	12.34	16.59	.438	9.00	.594	7.70
16X 5X .500/.875T	42.09	440.8	109.8	1571.2	5.8	3.6	14.3	12.38	16.88	.500	5.00	.875	8.94
18X 6X .500/.594T	42.70	481.7	115.0	1818.3	6.2	3.8	15.8	12.56	18.59	.500	6.00	.594	9.80
18X 5X .500/.719T	42.81	483.5	115.0	1831.7	6.3	3.8	15.9	12.59	18.72	.500	5.00	.719	9.86
14X10X .438/.656T	43.15	486.6	120.0	1451.1	5.6	3.6	12.1	12.69	14.66	.438	10.00	.656	6.86
16X 8X .438/.719T	43.35	459.9	127.5	1769.1	6.2	3.8	13.9	12.75	16.72	.438	8.00	.719	7.76
16X 9X .438/.656T	43.89	461.0	130.2	1792.5	6.2	3.9	13.8	12.91	16.66	.438	9.00	.656	7.74
18X 6X .500/.656T	44.00	489.9	121.3	1911.6	6.4	3.9	15.8	12.94	18.66	.500	6.00	.656	9.83
16X10X .438/.594T	44.00	460.7	131.0	1793.9	6.2	3.9	13.7	12.94	16.59	.438	10.00	.594	7.70
14X11X .438/.656T	45.36	412.8	129.0	1539.3	5.7	3.7	11.9	13.34	14.66	.438	11.00	.656	6.86
16X 9X .438/.719T	45.88	468.8	139.0	1899.7	6.3	4.1	13.7	13.47	16.72	.438	9.00	.719	7.76
16X10X .438/.656T	46.10	468.8	140.5	1909.3	6.3	4.1	13.6	13.56	16.66	.438	10.00	.656	7.74
18X 7X .500/.719T	47.70	510.1	140.4	2171.2	6.7	4.3	15.5	14.03	18.72	.500	7.00	.719	9.86
18X 6X .500/.875T	48.45	515.4	143.7	2233.3	6.8	4.3	15.5	14.25	18.88	.500	6.00	.875	9.94
18X 8X .500/.719T	50.15	528.8	153.0	2332.3	6.9	4.5	15.2	14.75	18.72	.500	8.00	.719	9.86
18X 9X .500/.656T	50.69	522.2	156.9	2362.3	6.9	4.5	15.1	14.91	18.66	.500	9.00	.656	9.83
18X10X .500/.594T	50.80	521.8	156.9	2363.7	6.9	4.5	15.1	14.94	18.59	.500	10.00	.594	9.80
18X 7X .500/.875T	51.44	527.7	159.0	2428.6	7.0	4.6	15.3	15.13	18.88	.500	7.00	.875	9.94
18X 9X .500/.719T	52.60	530.1	165.6	2487.8	7.1	4.7	15.0	15.47	18.72	.500	9.00	.719	9.86
18X10X .500/.656T	52.90	530.4	167.4	2501.7	7.1	4.7	14.9	15.56	18.66	.500	10.00	.656	9.83
18X 8X .500/.875T	54.41	538.5	174.3	2618.2	7.2	4.9	15.0	16.00	18.88	.500	8.00	.875	9.94
18X11X .500/.656T	55.15	538.0	179.0	2648.7	7.3	4.9	14.8	16.22	18.66	.500	11.00	.656	9.83
18X11X .500/.719T	57.49	546.1	191.0	2730.5	7.4	5.1	14.6	16.91	18.72	.500	11.00	.719	9.86

1.0000 - 1 in.

1000 SQ. IN. PLATE AREA= 34.00 SQ. IN.)

NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YP	VF	AREA	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL						DEPTH	WEB THICK	FLANGE WIDTH	
18X12X .719T	59.94	552.7	203.6	2933.7	7.5	5.3	14.4	17.63	18.72	12.00	.719	9.86
18X12X .875T	60.35	556.0	204.9	2976.5	7.6	5.4	14.5	17.75	18.88	10.00	.875	9.94
21X 8X .875T	68.44	633.1	225.2	3801.3	8.4	6.0	16.9	20.13	21.88	8.00	.875	14.30
21X10X .750T	70.14	637.8	236.1	3919.6	8.5	6.1	16.6	20.63	21.75	10.00	.750	14.22
21X 9X .875T	71.40	643.9	242.8	4034.4	8.6	6.3	16.6	21.00	21.88	9.00	.875	14.30
21X11X .750T	72.69	646.5	251.3	4117.3	8.6	6.4	16.4	21.38	21.75	11.00	.750	14.22
21X10X .875T	74.39	653.6	260.6	4262.9	8.7	6.5	16.4	21.88	21.88	10.00	.875	14.30
21X 9X .875/1.125T	79.05	670.3	286.4	4641.5	9.0	6.9	16.2	23.25	22.13	9.00	1.125	14.46
21X12X .875/1.125T	80.34	669.8	295.4	4690.3	9.0	7.0	15.9	23.63	22.88	12.00	.875	14.30
21X 9X .688/1.125T	82.89	742.7	297.3	5494.9	9.7	7.4	18.5	24.38	24.88	9.00	.688	17.81
21X13X .875/1.125T	83.30	676.9	313.0	4896.7	9.1	7.2	15.6	24.50	21.88	13.00	.875	14.30
21X10X .688/1.125T	85.85	753.5	317.0	5774.3	9.9	7.7	18.2	25.25	24.88	10.00	.875	17.81
21X14X .875/1.125T	86.29	683.2	330.4	5095.5	9.3	7.5	15.4	25.38	21.88	14.00	.875	14.30
21X 8X .688/1.125T	86.70	759.6	320.6	5891.4	10.0	7.8	18.4	25.50	25.13	8.00	1.125	17.98
21X11X .688/1.125T	88.84	763.2	336.7	6046.1	10.0	7.9	18.0	26.13	25.13	11.00	.688	17.81
21X 9X .688/1.125T	90.54	772.0	346.2	6245.3	10.1	8.1	18.0	26.63	25.13	9.00	1.125	17.98
21X12X .688/1.125T	91.80	772.2	356.6	6313.1	10.2	8.2	17.7	27.00	24.88	12.00	.688	17.81
21X13X .688/1.125T	94.79	780.4	376.4	6571.5	10.3	8.4	17.5	27.88	24.88	13.00	.688	17.81
21X11X .688/1.125T	98.19	792.5	396.4	6904.4	10.5	8.7	17.4	28.88	25.13	11.00	1.125	17.98
21X 8X .750/1.125T	99.45	863.2	384.5	7749.0	11.1	9.0	20.2	29.25	28.13	8.00	1.125	21.85
21X11X .750/1.125T	101.59	867.7	402.3	7938.0	11.1	9.1	19.7	29.88	27.88	11.00	.875	21.66
21X 9X .750/1.125T	103.29	877.0	412.6	8173.4	11.3	9.3	19.8	30.38	28.13	9.00	1.125	21.85
21X12X .750/1.125T	104.55	877.8	424.2	8259.6	11.3	9.4	19.5	30.75	27.88	12.00	.875	21.66
21X10X .750/1.125T	107.10	889.4	440.4	8579.6	11.4	9.6	19.5	31.50	28.13	10.00	1.125	21.85
21X11X .750/1.125T	110.94	900.5	468.3	8974.7	11.6	10.0	19.2	32.63	28.13	11.00	1.125	21.85
21X 9X .875/1.375T	122.40	911.6	485.5	9387.5	11.5	10.2	19.2	36.00	28.38	9.00	1.375	25.71
30X10X .875/1.375T	136.00	1035.8	593.3	12214.6	12.8	11.8	20.6	40.00	31.38	10.00	1.375	28.33
30X13X .875/1.125T	138.99	1040.4	620.5	12488.3	12.9	12.0	20.1	40.88	31.13	13.00	1.125	28.11
30X11X .875/1.375T	140.69	1048.8	630.3	12747.8	13.0	12.2	20.2	41.38	31.38	11.00	1.375	28.33
30X14X .875/1.125T	142.80	1050.5	651.0	12914.6	13.0	12.3	19.8	42.00	31.13	14.00	1.125	28.11
30X12X .875/1.375T	154.70	1081.6	741.7	14246.2	13.4	13.2	19.2	45.50	31.38	14.00	1.375	28.33
33X10X1.000/1.500T	163.20	1179.3	732.9	16046.4	14.0	13.6	21.9	46.00	34.50	10.00	1.500	35.50
33X11X1.000/1.375T	163.64	1178.6	738.3	16061.3	14.0	13.6	21.8	46.13	34.38	11.00	1.375	35.38
36X13X1.000/1.125T	172.14	1269.8	815.9	19055.7	15.0	14.8	23.4	50.63	37.13	13.00	1.125	38.13
33X13X1.000/1.375T	172.99	1205.0	818.5	17244.5	14.3	14.3	21.1	50.88	34.38	10.00	1.375	35.38
36X11X1.000/1.375T	173.84	1299.5	827.6	19404.3	15.1	14.9	23.4	51.13	37.38	11.00	1.375	38.38
36X10X1.000/1.750T	181.90	1331.0	895.4	20742.6	15.4	15.6	23.2	53.50	37.75	10.00	1.750	38.75
33X16X1.000/1.375T	187.00	1237.6	938.4	18892.2	14.6	15.3	20.1	55.00	34.38	16.00	1.375	35.38

1.0000 - 1 in.



1.125 IN. PLATE (AREA= 43.03 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .125/.188T	2.55	18.6	3.1	11.4	.5	.6	3.7	.75	3.19	.125	2.00	.188	.54
4X 2X .125/.188T	2.99	26.1	3.5	16.5	.6	.6	4.7	.88	4.19	.125	2.00	.188	.66
3X 3X .125/.188T	3.20	22.1	3.8	13.8	.6	.6	3.7	.94	3.19	.125	3.00	.188	.54
4X 3X .125/.188T	3.60	31.2	4.4	20.3	.7	.7	4.7	1.06	4.19	.125	3.00	.188	.66
4X 2X .188/.313T	4.69	35.6	5.0	23.9	.7	.7	4.8	1.38	4.31	.188	2.00	.313	1.02
5X 2X .188/.250T	4.90	44.5	5.4	30.7	.8	.7	5.7	1.44	5.25	.188	2.00	.250	1.20
3X 3X .188/.313T	5.10	29.8	5.3	19.9	.7	.7	3.6	1.50	3.31	.188	3.00	.313	.83
5X 2X .188/.313T	5.30	49.1	6.1	34.7	.9	.7	5.7	1.56	5.31	.188	2.00	.313	1.21
6X 2X .188/.313T	5.95	65.6	7.3	49.0	1.0	.7	6.7	1.75	6.31	.188	2.00	.313	1.48
6X 3X .188/.250T	6.39	70.8	8.2	54.1	1.1	.8	6.6	1.88	6.25	.188	3.00	.250	1.39
5X 4X .188/.250T	6.60	61.1	8.2	46.0	1.0	.8	5.6	1.94	5.25	.188	4.00	.250	1.20
4X 4X .188/.313T	6.80	50.2	7.9	37.0	.9	.7	4.7	2.00	4.31	.188	4.00	.313	1.02
6X 3X .188/.313T	7.00	78.5	9.3	62.0	1.2	.8	6.6	2.06	6.31	.188	3.00	.313	1.40
6X 4X .188/.250T	7.24	80.7	9.8	64.5	1.2	.8	6.6	2.13	6.25	.188	4.00	.250	1.39
5X 4X .188/.313T	7.45	68.8	9.6	54.0	1.1	.8	5.7	2.19	5.31	.188	4.00	.313	1.21
6X 4X .188/.313T	8.09	90.1	11.4	75.3	1.3	.8	6.6	2.38	6.31	.188	4.00	.313	1.40
5X 5X .188/.313T	8.50	77.1	11.3	63.3	1.2	.8	5.6	2.50	5.31	.188	5.00	.313	1.21
7X 3X .250/.313T	9.15	105.0	12.2	92.1	1.4	.9	7.6	2.69	7.31	.250	3.00	.313	2.11
6X 3X .250/.438T	9.55	96.2	12.5	83.9	1.4	.9	6.7	2.81	6.44	.250	3.00	.438	2.09
7X 3X .250/.375T	9.79	113.2	13.5	102.8	1.5	.9	7.6	2.88	7.38	.250	3.00	.375	2.13
8X 3X .250/.313T	10.00	129.7	14.3	121.8	1.6	.9	8.5	2.94	8.31	.250	3.00	.313	2.36
7X 4X .250/.313T	10.20	117.5	14.5	108.8	1.5	.9	7.5	3.00	7.31	.250	4.00	.313	2.11
7X 3X .250/.438T	10.40	120.8	14.9	113.3	1.6	.9	7.6	3.06	7.44	.250	3.00	.438	2.14
8X 3X .250/.375T	10.64	139.0	15.9	135.4	1.7	1.0	8.5	3.13	8.38	.250	3.00	.375	2.38
9X 3X .250/.313T	10.85	155.9	16.6	156.9	1.8	1.0	9.4	3.19	9.31	.250	3.00	.313	2.61
8X 4X .250/.313T	11.05	144.0	17.8	143.3	1.8	1.0	8.4	3.25	8.31	.250	4.00	.313	2.36
7X 5X .250/.313T	11.25	128.7	16.8	125.5	1.6	1.0	7.5	3.31	7.31	.250	5.00	.313	2.11
8X 3X .250/.438T	11.25	147.6	17.4	148.7	1.8	1.0	8.6	3.31	8.44	.250	3.00	.438	2.39
9X 3X .250/.375T	11.49	166.2	18.4	173.7	1.9	1.0	9.5	3.38	9.38	.250	3.00	.375	2.63
9X 4X .250/.313T	11.90	171.7	19.6	183.4	2.0	1.1	9.4	3.50	9.31	.250	4.00	.313	2.61
8X 3X .250/.438T	12.10	175.9	20.1	190.4	2.0	1.1	9.5	3.56	9.44	.250	3.00	.438	2.64
8X 5X .250/.313T	12.10	156.4	19.6	164.3	1.9	1.1	8.4	3.56	8.31	.250	5.00	.313	2.36
9X 4X .250/.375T	12.75	183.9	21.9	205.8	2.1	1.1	9.4	3.75	9.38	.250	4.00	.375	2.63
9X 5X .250/.313T	12.95	185.8	22.6	209.9	2.1	1.1	9.3	3.81	9.31	.250	5.00	.313	2.61
8X 5X .250/.375T	13.19	168.7	22.3	186.9	2.0	1.1	8.4	3.88	8.38	.250	5.00	.375	2.38
7X 5X .250/.438T	13.40	149.4	21.5	160.9	1.9	1.1	7.5	3.94	7.44	.250	5.00	.438	2.14
9X 4X .250/.375T	13.60	194.6	24.2	227.3	2.2	1.2	9.4	4.00	9.44	.250	4.00	.375	2.64
9X 5X .250/.375T	14.04	198.9	25.5	237.2	2.2	1.2	9.3	4.13	9.38	.250	5.00	.375	2.63
8X 5X .250/.438T	14.25	179.3	24.8	208.5	2.1	1.2	8.4	4.19	8.44	.250	5.00	.438	2.39
8X 6X .250/.375T	14.45	180.7	25.4	211.8	2.1	1.2	8.3	4.25	8.38	.250	6.00	.375	2.38
7X 6X .250/.438T	14.89	160.6	24.7	183.6	2.0	1.1	7.4	4.38	7.44	.250	6.00	.438	2.14
9X 5X .250/.438T	15.10	210.8	28.4	264.4	2.4	1.3	9.3	4.44	9.44	.250	5.00	.438	2.64
9X 6X .250/.375T	15.30	211.9	29.0	267.7	2.4	1.3	9.2	4.50	9.38	.250	6.00	.375	2.63
10X 4X .313/.375T	15.74	218.9	27.1	277.1	2.4	1.3	10.2	4.63	10.38	.313	4.00	.375	3.60
8X 6X .250/.438T	15.74	191.9	28.5	237.5	2.2	1.2	8.3	4.63	8.44	.250	6.00	.438	2.39

1.1250 - 1 1/8 in.

1.125 IN. PLATE (AREA= 43.03 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	VP	VF	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL						THICK	WIDTH	
7X 7X .250/.430T	16.35	170.5	20.0	2.1	1.2	7.4	4.01	7.44	.250	7.00	.430
10X 4X .313/.430T	16.59	229.8	29.6	2.5	1.3	10.2	4.00	10.44	.313	6.00	.430
9X 6X .250/.430T	16.59	224.5	32.5	2.5	1.3	9.2	4.00	9.44	.250	6.00	.430
10X 5X .313/.375T	17.00	234.2	31.0	2.6	1.3	10.2	5.00	10.38	.313	5.00	.375
8X 7X .250/.430T	17.20	202.8	32.2	2.4	1.3	8.3	5.06	8.44	.250	7.00	.430
10X 4X .313/.500T	17.44	240.2	32.2	2.6	1.4	10.3	5.13	10.50	.313	4.00	.500
9X 7X .250/.430T	18.05	236.3	36.6	2.6	1.4	9.1	5.31	9.44	.250	7.00	.430
10X 6X .313/.375T	18.29	247.4	34.9	2.7	1.4	10.1	5.38	10.38	.313	5.00	.375
10X 5X .313/.500T	19.14	256.9	37.3	2.8	1.5	10.1	5.63	10.50	.313	6.00	.500
10X 6X .313/.430T	19.55	259.8	38.7	2.8	1.5	10.1	5.94	10.44	.313	6.00	.430
10X 5X .313/.563T	20.20	267.0	40.5	2.9	1.5	10.1	5.94	10.56	.313	5.00	.563
10X 6X .313/.500T	20.84	271.3	42.6	2.9	1.6	10.0	6.13	10.50	.313	6.00	.500
10X 7X .313/.430T	21.05	272.0	43.2	3.0	1.6	10.0	6.19	10.44	.313	7.00	.430
9X 7X .313/.500T	21.45	248.6	42.3	2.8	1.5	9.1	6.31	9.50	.313	7.00	.500
12X 4X .375/.469T	21.69	304.6	42.0	3.2	1.6	11.9	6.38	12.47	.375	4.00	.469
10X 6X .313/.563T	22.10	281.6	46.4	3.1	1.7	10.0	6.50	10.56	.313	6.00	.563
10X 7X .313/.500T	22.54	283.6	47.7	3.1	1.7	10.0	6.63	10.50	.313	7.00	.500
12X 4X .375/.531T	22.54	314.8	45.0	3.3	1.7	11.9	6.63	12.53	.375	4.00	.531
9X 7X .313/.563T	22.95	250.7	46.5	2.9	1.6	9.1	6.75	9.56	.313	7.00	.563
9X 8X .313/.500T	23.15	258.9	47.1	2.9	1.6	9.0	6.81	9.50	.313	8.00	.500
12X 5X .375/.469T	23.26	322.0	47.8	3.4	1.8	11.8	6.84	12.47	.375	5.00	.469
12X 4X .375/.594T	23.39	324.5	48.0	3.4	1.8	11.9	6.88	12.59	.375	4.00	.594
10X 7X .313/.563T	24.00	294.0	52.2	3.2	1.8	9.9	7.06	10.56	.313	7.00	.563
10X 8X .313/.500T	24.24	294.6	53.0	3.2	1.8	9.9	7.13	10.50	.313	8.00	.500
12X 4X .375/.656T	24.24	333.3	50.9	3.5	1.8	12.0	7.13	12.66	.375	4.00	.656
9X 8X .313/.563T	24.85	268.7	51.7	3.0	1.7	9.0	7.31	9.56	.313	8.00	.563
12X 6X .375/.469T	24.85	335.8	53.5	3.5	1.9	11.7	7.31	12.47	.375	6.00	.469
12X 5X .375/.594T	25.40	342.8	55.2	3.6	1.9	11.8	7.37	12.59	.375	5.00	.594
10X 8X .313/.563T	25.94	305.2	58.1	3.4	1.9	9.8	7.63	10.56	.313	8.00	.563
12X 5X .375/.656T	26.45	352.3	59.0	3.7	2.0	11.8	7.78	12.66	.375	5.00	.656
12X 7X .375/.469T	26.45	349.8	59.3	3.7	2.0	11.6	7.78	12.47	.375	7.00	.469
12X 6X .375/.594T	27.40	358.5	62.5	3.8	2.0	11.7	8.06	12.59	.375	6.00	.594
12X 7X .375/.531T	27.95	361.6	64.6	3.8	2.1	11.6	8.22	12.53	.375	7.00	.531
12X 6X .375/.656T	28.70	368.1	67.0	3.9	2.1	11.7	8.44	12.66	.375	6.00	.656
12X 7X .375/.594T	29.44	371.9	69.8	3.9	2.2	11.5	8.66	12.59	.375	7.00	.594
12X 8X .375/.531T	29.75	372.9	71.0	4.0	2.2	11.5	8.66	12.53	.375	8.00	.531
14X 5X .438/.531T	29.85	404.8	66.8	4.2	2.2	13.4	9.09	14.53	.438	5.00	.531
14X 6X .438/.594T	30.91	415.0	71.0	4.3	2.3	13.4	9.28	14.59	.438	5.00	.594
14X 5X .375/.594T	31.45	383.6	77.1	4.1	2.3	11.4	9.28	12.53	.375	9.00	.594
12X 9X .375/.531T	31.55	383.4	77.6	4.1	2.3	11.4	9.28	12.53	.375	6.00	.531
14X 6X .438/.531T	31.65	420.7	74.3	4.3	2.4	13.3	9.41	14.66	.438	5.00	.531
14X 5X .438/.656T	31.99	424.8	75.4	4.4	2.4	13.4	9.41	14.53	.438	6.00	.656
16X 5X .438/.531T	32.84	475.3	80.2	4.8	2.5	15.1	9.66	16.53	.438	5.00	.531
14X 6X .438/.594T	32.95	431.2	79.5	4.5	2.4	13.3	9.69	14.59	.438	6.00	.594
14X 5X .438/.719T	33.05	433.7	79.6	4.5	2.5	13.4	9.72	14.72	.438	5.00	.719

1.1250 - 1 1/8 in.



1.125 IN. PLATE (AREA= 43.03 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		DIMENSIONS		BEAM		FLANGE		SHEAR		
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WIDTH	THICK	AREA
12X 8X .375/ .656T	33.15	393.5	93.1	946.3	4.2	11.4	9.75	12.66	.375	8.00	.656	5.17
14X 7X .438/ .531T	33.46	434.6	81.9	1078.5	4.5	13.2	9.84	14.53	.438	7.00	.531	6.06
16X 5X .438/ .594T	33.90	486.3	95.1	1282.7	4.9	15.1	9.97	16.59	.438	5.00	.594	6.76
14X 6X .438/ .656T	34.20	441.4	84.6	1120.9	4.6	13.2	10.86	14.66	.438	6.00	.656	6.91
16X 6X .438/ .531T	34.65	492.4	88.8	1328.4	5.0	15.0	10.19	16.53	.438	6.00	.531	7.73
16X 5X .438/ .656T	34.95	496.6	89.9	1354.0	5.0	15.1	10.28	16.66	.438	5.00	.656	7.79
14X 7X .438/ .594T	34.95	445.4	87.9	1153.5	4.7	13.1	10.20	14.59	.438	7.00	.594	6.88
16X 8X .438/ .531T	35.29	446.7	89.4	1166.6	4.7	13.0	10.38	14.53	.438	8.00	.531	6.86
16X 6X .438/ .594T	35.90	593.8	94.6	1411.3	5.1	14.9	10.56	16.59	.438	6.00	.594	7.76
16X 5X .438/ .719T	36.01	506.3	94.8	1424.9	5.2	15.0	10.59	16.72	.438	5.00	.719	7.82
16X 7X .438/ .531T	36.45	507.2	97.3	1441.6	5.2	14.8	10.72	16.53	.438	7.00	.531	7.73
16X 8X .438/ .594T	36.99	457.9	96.4	1251.2	4.8	13.0	10.80	14.59	.438	8.00	.594	6.88
14X 8X .438/ .531T	37.09	457.6	97.0	1252.7	4.8	12.9	10.91	14.53	.438	9.00	.531	6.86
16X 7X .438/ .594T	37.94	518.8	104.2	1536.8	5.3	14.8	11.16	16.59	.438	7.00	.594	7.76
16X 8X .438/ .531T	38.25	520.1	105.8	1551.8	5.3	14.7	11.25	16.53	.438	8.00	.531	7.73
16X 6X .438/ .719T	38.45	524.4	106.3	1577.6	5.4	14.8	11.31	16.72	.438	6.00	.719	7.82
16X 7X .438/ .656T	39.41	529.7	110.9	1631.3	5.5	14.7	11.59	16.66	.438	7.00	.656	7.79
16X 8X .438/ .594T	39.95	532.0	113.6	1658.6	5.5	14.6	11.75	16.59	.438	8.00	.594	7.76
16X 9X .438/ .531T	40.05	531.7	114.3	1660.4	5.5	14.5	11.78	16.53	.438	9.00	.531	7.73
16X 7X .438/ .719T	40.90	539.9	117.9	1726.6	5.6	14.6	12.03	16.72	.438	7.00	.719	7.82
16X 8X .438/ .656T	41.65	543.1	121.5	1765.7	5.7	14.5	12.25	16.66	.438	8.00	.656	7.79
16X 5X .500/ .656T	41.75	569.6	111.5	1844.7	5.8	16.5	12.20	18.66	.500	5.00	.656	9.09
16X 9X .438/ .594T	41.96	543.9	123.2	1778.9	5.7	14.4	12.34	16.59	.438	9.00	.594	7.76
16X 5X .500/ .875T	42.09	527.7	111.5	1657.7	5.5	14.9	12.38	16.88	.500	5.00	.875	9.08
18X 6X .500/ .594T	42.70	577.2	116.9	1915.9	5.9	16.4	12.56	18.59	.500	6.00	.594	9.06
18X 5X .500/ .719T	42.81	579.4	116.9	1930.1	5.9	16.5	12.59	18.72	.500	5.00	.719	9.92
16X 10X .438/ .656T	43.15	488.6	121.7	1538.0	5.3	13.1	12.6	14.66	.438	10.00	.656	6.91
16X 8X .438/ .719T	43.35	553.2	129.3	1870.7	5.8	14.5	12.75	16.72	.438	8.00	.719	7.79
16X 9X .438/ .656T	43.89	554.9	132.8	1896.4	5.8	14.4	12.91	16.66	.438	9.00	.656	7.79
16X 6X .500/ .656T	44.00	587.9	123.3	2016.3	6.0	16.4	12.94	18.66	.500	6.00	.656	9.09
16X 10X .438/ .594T	44.00	554.5	132.8	1838.1	5.8	14.3	12.94	16.59	.438	10.00	.594	7.76
14X 11X .438/ .656T	45.36	497.0	130.8	1634.7	5.4	13.2	13.34	14.66	.438	11.00	.656	6.91
16X 9X .438/ .719T	45.80	565.2	141.0	2013.3	6.0	16.4	13.47	16.72	.438	9.00	.719	7.82
16X 10X .438/ .656T	46.10	555.4	142.5	2024.0	6.0	16.4	13.56	16.66	.438	10.00	.656	7.79
16X 7X .500/ .719T	47.70	614.3	142.6	2297.3	6.3	16.1	14.03	18.72	.500	7.00	.719	9.92
18X 6X .500/ .875T	48.45	621.0	146.8	2364.2	6.4	16.2	14.25	18.88	.500	6.00	.875	10.00
18X 8X .500/ .719T	50.15	628.3	155.4	2472.7	6.5	15.9	14.75	18.72	.500	8.00	.719	9.92
18X 9X .500/ .656T	50.69	630.3	158.5	2505.7	6.6	15.8	14.91	18.66	.500	9.00	.656	9.89
16X 10X .500/ .594T	50.80	638.0	159.4	2507.6	6.6	15.7	14.94	18.59	.500	10.00	.594	9.06
18X 7X .500/ .875T	51.44	637.3	161.5	2577.3	6.7	16.0	15.13	18.88	.500	7.00	.875	10.00
18X 9X .500/ .719T	52.60	640.7	168.1	2642.9	6.7	16.1	15.47	18.72	.500	9.00	.719	9.92
18X 10X .500/ .656T	52.90	641.3	170.0	2658.4	6.7	16.1	15.56	18.66	.500	10.00	.656	9.89
18X 8X .500/ .875T	54.40	651.7	177.1	2785.3	6.9	15.7	16.00	18.88	.500	8.00	.875	10.00
18X 11X .500/ .656T	55.15	651.3	181.7	2811.3	6.9	15.5	16.22	18.66	.500	11.00	.656	9.89
18X 11X .500/ .719T	57.49	662.0	133.9	2976.4	7.0	15.3	16.91	18.72	.500	11.00	.719	9.92

1.125 IN. PLATE (AREA= 43.03 SQ. IN.)

***** BEAM DIMENSIONS *****													
FLANGE													
WEB													
THICK													
DEPTH													
AREA													
VF													
VP													
R													
INERTIA													
ZFL													
ZPL													
MODULUS													
WT/FT													
NOMINAL SIZE													
10X12X .500/.719T	59.94	670.9	206.6	3135.1	7.2	4.7	15.2	17.63	10.72	.500	12.00	.719	9.92
10X10X .500/.875T	60.35	675.1	208.1	3181.6	7.2	4.7	15.3	17.75	10.88	.500	10.00	.875	10.00
21X 8X .625/.875T	68.44	766.7	229.5	4062.9	8.0	5.3	17.7	20.13	21.88	.625	8.00	.875	14.38
21X10X .625/.750T	70.14	772.8	240.4	4194.4	8.1	5.4	17.4	20.63	21.75	.625	10.00	.750	14.30
21X 9X .625/.875T	71.40	780.6	247.3	4320.7	8.2	5.5	17.5	21.00	21.88	.625	9.00	.875	14.38
21X11X .625/.750T	72.69	784.1	255.9	4413.6	8.3	5.6	17.2	21.38	21.75	.625	11.00	.750	14.38
21X10X .625/.875T	74.39	793.1	265.4	4574.5	8.4	5.8	17.2	21.88	21.88	.625	10.00	.875	14.38
21X 9X .625/1.125T	79.05	814.4	231.7	4995.1	8.7	6.1	17.1	23.25	22.13	.625	9.00	1.125	14.53
21X12X .625/.875T	80.34	814.0	300.8	5052.5	8.7	6.2	16.8	23.63	21.88	.625	12.00	.875	14.38
24X 9X .688/.875T	82.89	899.6	303.5	5901.1	9.4	6.6	19.4	24.38	24.88	.688	9.00	.875	17.09
21X13X .625/.875T	83.30	823.3	318.6	5284.7	8.8	6.4	16.6	24.50	21.88	.625	13.00	.875	14.38
24X10X .688/.875T	85.85	913.2	323.5	6211.7	9.5	6.8	19.2	25.25	24.88	.688	10.00	.875	17.09
21X14X .625/.875T	86.29	831.5	336.4	5509.3	9.0	6.6	16.4	25.38	21.88	.625	14.00	.875	14.38
24X 8X .688/1.125T	86.70	920.8	327.3	6339.8	9.6	6.9	19.4	25.50	25.13	.688	8.00	1.125	18.06
24X11X .688/.875T	88.84	925.6	343.5	6515.1	9.7	7.0	19.0	26.13	24.88	.688	11.00	.875	17.09
24X 9X .688/1.125T	90.54	936.5	353.3	6735.4	9.8	7.2	19.1	26.63	25.13	.688	9.00	1.125	18.06
24X12X .688/.875T	91.80	937.1	363.8	6814.2	9.9	7.3	18.7	27.00	24.88	.688	12.00	.875	17.09
24X13X .688/.875T	94.79	947.4	383.9	7184.9	10.0	7.5	18.5	27.88	24.88	.688	13.00	.875	17.09
24X11X .688/1.125T	98.19	962.5	404.5	7477.4	10.2	7.8	18.5	28.88	25.13	.688	11.00	1.125	18.06
27X 8X .750/1.125T	99.45	1044.1	393.3	8358.5	10.8	8.0	20.2	29.25	26.13	.750	8.00	1.125	21.94
27X11X .750/.875T	101.59	1049.8	411.4	8572.4	10.8	8.2	20.8	29.88	27.68	.750	11.00	.875	21.75
27X 9X .750/1.125T	103.29	1061.3	422.0	8832.8	11.0	8.3	20.9	30.38	28.13	.750	9.00	1.125	21.94
27X12X .750/.875T	104.55	1062.5	433.7	8932.5	11.0	8.4	20.6	30.75	27.88	.750	12.00	.875	21.75
27X10X .750/1.125T	107.18	1076.6	450.3	9288.7	11.2	8.6	20.6	31.50	28.13	.750	10.00	1.125	21.94
27X11X .750/1.125T	110.94	1090.5	478.8	9734.0	11.3	8.9	20.3	32.63	28.13	.750	11.00	1.125	21.94
27X 9X .875/1.375T	122.40	1099.9	497.7	10189.7	11.3	9.2	20.3	36.00	28.38	.875	9.00	1.375	25.82
30X10X .875/1.375T	136.00	1247.8	608.6	13296.8	12.7	10.7	21.8	40.00	31.38	.875	10.00	1.375	28.44
30X13X .875/1.125T	138.99	1253.6	636.1	13611.7	12.7	10.9	21.4	40.88	31.13	.875	13.00	1.125	28.22
30X11X .875/1.375T	140.69	1263.7	646.4	13901.0	12.8	11.0	21.5	41.38	31.38	.875	11.00	1.375	28.44
30X14X .875/1.125T	142.80	1266.0	667.3	14095.1	12.9	11.1	21.1	42.00	31.13	.875	14.00	1.125	28.22
30X11X .875/1.375T	154.72	1303.8	760.4	15611.3	13.3	12.0	20.5	45.50	31.38	.875	14.00	1.375	28.44
33X10X1.000/1.500T	163.20	1411.9	753.9	17589.1	13.9	12.4	23.2	48.00	34.50	1.000	10.00	1.500	35.63
33X11X1.000/1.375T	163.64	1411.1	759.4	17528.7	13.9	12.4	23.1	48.13	34.38	1.000	11.00	1.375	35.31
36X13X1.000/1.125T	172.14	1540.0	832.5	20789.6	14.9	13.5	24.8	50.63	37.13	1.000	13.00	1.125	38.26
33X13X1.000/1.375T	172.99	1442.8	841.5	18970.4	14.2	13.1	22.4	50.88	34.38	1.000	13.00	1.375	35.31
36X11X1.000/1.375T	173.84	1552.0	851.8	21177.1	15.0	13.6	24.9	51.13	37.38	1.000	11.00	1.375	38.51
36X10X1.000/1.750T	181.90	1589.4	921.8	22680.6	15.3	14.3	24.6	53.50	37.75	1.000	10.00	1.750	38.88
33X16X1.000/1.375T	187.88	1482.8	964.3	20741.7	14.5	14.0	21.5	55.00	34.38	1.000	16.00	1.375	35.31

1.1250 - 1 1/8 in.



1.250 IN. PLATE (AREA= 53.13 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	VP	VF	AREA	DEPTH	WEB THICK	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	THICK	
3X 2X .125/.108T	2.55	21.1	3.7	14.0	.5	.7	3.0	.75	3.19	.125	2.00	.166	.56
4X 2X .125/.108T	2.99	28.2	4.1	19.3	.6	.7	4.0	.88	4.19	.125	2.00	.188	.68
3X 3X .125/.108T	3.20	24.5	4.4	16.6	.6	.7	3.8	.94	3.19	.125	3.00	.188	.56
4X 3X .125/.108T	3.60	33.3	4.9	23.2	.7	.7	4.7	1.06	4.19	.125	3.00	.188	.68
4X 2X .108/.313T	4.63	37.7	5.6	27.0	.7	.7	4.6	1.38	4.31	.188	2.00	.313	1.05
5X 2X .108/.250T	4.90	46.4	5.9	33.9	.8	.7	5.0	1.44	5.25	.188	2.00	.250	1.22
3X 3X .108/.313T	5.18	32.2	6.0	22.9	.6	.7	3.8	1.50	3.31	.188	3.00	.313	.86
5X 2X .108/.313T	5.30	51.1	6.5	38.1	.8	.7	5.0	1.56	5.31	.188	2.00	.313	1.23
6X 2X .108/.313T	5.95	67.8	7.6	52.6	1.0	.8	6.0	1.75	6.31	.188	2.00	.313	1.42
6X 3X .108/.250T	6.39	73.1	8.6	57.9	1.0	.8	6.7	1.88	6.25	.188	3.00	.250	1.41
5X 4X .108/.250T	6.60	63.5	8.7	49.7	1.0	.8	5.7	1.94	5.25	.188	4.00	.250	1.22
6X 4X .108/.313T	6.80	52.7	8.5	40.6	.9	.8	4.8	2.00	4.31	.188	4.00	.313	1.05
6X 3X .108/.313T	7.00	81.2	9.8	66.1	1.1	.8	6.7	2.06	6.31	.188	3.00	.313	1.42
6X 4X .108/.250T	7.24	83.6	10.3	68.7	1.1	.8	6.7	2.13	6.25	.188	4.00	.250	1.41
5X 4X .108/.313T	7.45	71.7	10.1	58.0	1.0	.8	5.8	2.19	5.31	.188	4.00	.313	1.23
6X 4X .108/.313T	8.09	93.8	11.9	79.8	1.2	.9	6.7	2.38	6.31	.188	4.00	.313	1.42
5X 5X .108/.313T	8.50	80.6	11.8	67.7	1.1	.8	5.7	2.50	5.31	.188	5.00	.313	1.23
7X 3X .250/.313T	9.15	109.6	12.6	97.0	1.3	.9	7.7	2.69	7.31	.250	3.00	.313	2.14
6X 3X .250/.438T	9.55	100.6	13.0	88.8	1.3	.9	6.8	2.81	6.44	.250	3.00	.438	1.92
7X 3X .250/.375T	9.79	118.6	14.0	108.0	1.4	.9	7.7	2.88	7.38	.250	3.00	.375	2.16
8X 3X .250/.313T	10.00	135.9	14.8	127.4	1.5	.9	8.6	2.94	8.31	.250	3.00	.313	2.39
7X 4X .250/.313T	10.20	123.3	15.0	114.3	1.4	.9	7.6	3.00	7.31	.250	4.00	.313	2.14
7X 3X .250/.438T	10.48	127.0	15.3	118.9	1.5	.9	7.8	3.06	7.44	.250	3.00	.438	2.17
8X 3X .250/.375T	10.64	146.4	16.3	141.5	1.6	1.0	8.7	3.13	8.38	.250	3.00	.375	2.41
9X 3X .250/.313T	10.85	164.5	17.1	163.4	1.7	1.0	9.6	3.19	9.31	.250	3.00	.313	2.64
8X 4X .250/.313T	11.05	152.0	17.4	149.6	1.6	1.0	8.6	3.25	8.31	.250	4.00	.313	2.39
7X 5X .250/.313T	11.25	135.9	17.3	131.6	1.5	1.0	7.6	3.31	7.31	.250	5.00	.313	2.14
8X 3X .250/.438T	11.25	156.1	17.8	155.2	1.7	1.0	8.7	3.31	8.44	.250	3.00	.438	2.42
9X 3X .250/.375T	11.49	176.2	18.8	180.6	1.8	1.0	9.6	3.38	9.38	.250	3.00	.375	2.66
9X 4X .250/.313T	11.90	182.6	20.0	190.7	1.8	1.0	9.5	3.50	9.31	.250	4.00	.313	2.64
8X 5X .250/.438T	12.10	187.3	20.5	197.9	1.9	1.1	9.6	3.56	9.44	.250	3.00	.438	2.67
9X 5X .250/.375T	12.10	166.4	20.1	171.3	1.7	1.0	8.5	3.56	8.31	.250	5.00	.375	2.39
9X 4X .250/.375T	12.75	196.7	22.4	213.8	1.9	1.1	9.5	3.75	9.38	.250	4.00	.375	2.66
9X 5X .250/.313T	12.95	199.0	23.8	218.1	2.0	1.1	9.5	3.81	9.31	.250	5.00	.313	2.64
8X 5X .250/.375T	13.19	180.7	22.0	194.8	1.8	1.1	8.6	3.88	8.38	.250	5.00	.375	2.41
7X 5X .250/.438T	13.40	159.9	22.8	168.3	1.7	1.1	7.6	3.94	7.44	.250	5.00	.438	2.17
9X 4X .250/.438T	13.60	209.2	24.7	236.1	2.0	1.1	9.6	4.00	9.44	.250	4.00	.438	2.67
9X 5X .250/.375T	14.04	214.5	26.0	246.3	2.1	1.1	9.5	4.13	9.38	.250	5.00	.375	2.66
8X 5X .250/.438T	14.25	193.2	25.3	217.1	1.9	1.1	8.6	4.19	8.44	.250	5.00	.438	2.42
8X 6X .250/.375T	14.45	194.9	26.0	220.6	2.0	1.1	8.5	4.25	8.38	.250	6.00	.375	2.41
7X 6X .250/.438T	14.89	173.2	25.3	192.0	1.8	1.1	7.6	4.38	7.44	.250	5.00	.438	2.17
9X 5X .250/.438T	15.10	228.0	28.9	274.5	2.2	1.2	9.5	4.44	9.44	.250	5.00	.438	2.67
9X 6X .250/.375T	15.30	230.1	29.5	278.0	2.2	1.2	9.4	4.50	9.38	.250	6.00	.375	2.66
10X 4X .313/.375T	15.74	237.5	27.6	287.5	2.2	1.2	10.4	4.63	10.38	.313	4.00	.375	3.64
8X 6X .250/.438T	15.74	208.4	29.1	247.4	2.1	1.2	8.5	4.63	8.44	.250	6.00	.438	2.42

1.12500 - 1 1/4 in.

1.250 IN. PLATE (AREA= 53.13 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS		R	VP	VF	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL				INERTIA	DEPTH	FLANGE	
							THICK	WIDTH	THICK
7X 7X .250/.438T	16.35	185.2	1.9	1.2	7.5	215.6	.250	7.00	.438
10X 4X .313/.438T	16.59	250.6	2.3	1.3	10.4	314.6	.313	4.00	.438
9X 6X .250/.438T	16.59	245.5	2.3	1.3	9.4	311.7	.250	6.00	.438
10X 5X .313/.375T	17.00	255.9	2.4	1.3	10.4	326.7	.313	5.00	.375
8X 7X .250/.438T	17.20	221.7	2.2	1.2	8.4	277.0	.250	7.00	.438
10X 4X .313/.500T	17.44	263.0	2.4	1.3	10.4	342.2	.313	4.00	.500
9X 7X .250/.438T	18.05	260.2	2.4	1.3	9.4	348.1	.250	7.00	.438
10X 6X .313/.375T	18.29	272.1	2.5	1.3	10.3	365.1	.313	6.00	.375
10X 5X .313/.500T	19.14	283.6	2.6	1.4	10.4	393.5	.313	5.00	.500
10X 6X .313/.438T	19.55	287.4	2.6	1.4	10.3	404.3	.313	6.00	.438
10X 5X .313/.563T	20.20	296.1	2.7	1.4	10.4	427.0	.313	5.00	.563
10X 6X .313/.500T	20.84	301.7	2.7	1.5	10.3	444.3	.313	6.00	.500
9X 7X .313/.500T	21.05	302.7	2.7	1.5	10.2	440.4	.313	7.00	.438
12X 4X .375/.469T	21.69	339.3	3.0	1.5	12.2	519.6	.375	4.00	.469
10X 6X .313/.563T	22.10	314.6	2.8	1.5	10.3	493.6	.313	6.00	.563
10X 7X .313/.500T	22.54	317.3	2.9	1.6	10.2	493.9	.313	7.00	.500
12X 4X .375/.531T	22.54	351.9	3.1	1.6	12.2	557.1	.375	4.00	.531
9X 7X .313/.563T	22.95	289.1	2.7	1.5	9.3	438.7	.313	7.00	.563
9X 8X .313/.500T	23.15	289.6	2.7	1.5	9.2	441.4	.313	8.00	.500
12X 5X .375/.469T	23.26	360.9	3.1	1.6	12.1	586.4	.375	5.00	.469
12X 4X .375/.594T	23.33	363.9	3.1	1.6	12.2	594.9	.375	4.00	.594
10X 7X .313/.563T	24.00	330.6	3.0	1.6	10.2	538.0	.313	7.00	.563
10X 8X .313/.500T	24.24	331.6	3.0	1.6	10.1	543.7	.313	8.00	.500
12X 4X .375/.656T	24.24	374.9	3.2	1.7	12.2	631.5	.375	4.00	.656
9X 8X .313/.563T	24.85	302.1	2.8	1.6	9.2	483.6	.313	8.00	.563
12X 6X .375/.469T	24.85	379.6	3.3	1.7	12.0	651.6	.375	6.00	.469
12X 5X .375/.594T	25.40	387.0	3.3	1.7	12.1	677.2	.375	5.00	.594
10X 8X .313/.563T	25.94	345.1	3.1	1.7	10.1	594.7	.313	8.00	.563
12X 5X .375/.656T	26.45	399.1	3.4	1.8	12.1	723.3	.375	5.00	.656
12X 7X .375/.594T	26.45	396.2	3.4	1.8	11.9	716.0	.375	7.00	.594
12X 6X .375/.594T	27.48	407.1	3.5	1.9	12.0	758.0	.375	6.00	.594
12X 7X .375/.531T	27.95	411.3	3.5	1.9	11.9	778.6	.375	7.00	.531
12X 6X .375/.656T	28.70	419.5	3.6	1.9	12.0	812.0	.375	6.00	.656
12X 7X .375/.594T	29.44	424.6	3.7	2.0	11.9	839.4	.375	7.00	.594
12X 8X .375/.531T	29.75	426.0	3.7	2.0	11.8	848.6	.375	8.00	.531
14X 5X .438/.531T	29.85	461.8	3.9	2.0	13.0	932.1	.438	5.00	.531
14X 5X .438/.594T	30.91	474.6	4.0	2.1	13.0	990.5	.438	5.00	.594
12X 8X .375/.594T	31.45	439.9	3.8	2.1	11.8	917.9	.375	8.00	.594
14X 6X .438/.531T	31.65	482.0	4.1	2.1	13.6	1020.2	.438	6.00	.531
14X 5X .438/.656T	31.99	487.1	4.1	2.2	13.0	1051.1	.438	5.00	.656
16X 5X .438/.531T	32.84	546.7	4.5	2.3	15.5	1258.1	.438	5.00	.531
14X 6X .438/.594T	32.95	495.5	4.2	2.2	13.6	1097.3	.438	6.00	.594
14X 5X .438/.719T	33.05	490.5	4.2	2.2	13.7	1109.2	.438	5.00	.719

1.2500 - 1 1/4 in.



1.250 IN. PLATE (AREA= 53.13 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS		INERTIA	R	YF	AREA	BEAM DIMENSIONS			SHEAR AREA
	WT/LI	ZPL	ZFL				WEB THICK	FLANGE WIDTH	THICK	
12X 8X .375/ .656T	33.15	452.8	84.2	987.7	4.0	2.2	11.7	9.75	12.66	5.22
14X 7X .438/ .531T	33.46	499.9	83.0	1122.9	4.2	2.2	13.5	9.84	14.53	5.91
16X 5X .438/ .594T	33.90	560.6	86.2	1333.2	4.6	2.4	15.5	9.97	16.59	7.81
14X 6X .438/ .656T	34.20	508.5	85.8	1167.5	4.3	2.3	13.6	10.06	14.66	6.97
16X 6X .438/ .531T	34.65	568.5	90.0	1381.4	4.7	2.4	15.4	10.19	16.53	7.79
16X 5X .438/ .656T	34.99	573.7	91.1	1408.2	4.7	2.5	15.5	10.28	16.66	7.84
14X 8X .438/ .594T	34.95	513.8	89.0	1202.1	4.4	2.3	13.5	10.28	14.59	6.94
16X 6X .438/ .531T	35.29	515.6	90.6	1216.1	4.4	2.4	13.4	10.38	14.53	6.91
16X 6X .438/ .594T	35.90	583.0	95.9	1468.8	4.8	2.5	15.3	10.56	16.59	7.81
16X 5X .438/ .719T	36.01	586.0	96.1	1493.0	4.8	2.5	15.4	10.59	16.72	7.87
16X 7X .438/ .531T	36.45	587.4	98.6	1501.0	4.8	2.6	15.2	10.72	16.53	7.79
14X 8X .438/ .594T	36.93	530.1	97.6	1305.8	4.5	2.5	13.4	10.88	14.59	6.94
16X 7X .438/ .531T	37.09	529.9	98.2	1387.5	4.5	2.5	13.3	10.91	14.53	6.91
16X 7X .438/ .594T	37.94	602.4	105.5	1601.6	5.0	2.7	15.2	11.16	16.59	7.81
16X 8X .438/ .531T	38.25	604.2	107.1	1617.7	5.0	2.7	15.1	11.25	16.53	7.79
16X 6X .438/ .719T	39.45	609.4	107.7	1644.6	5.1	2.7	15.3	11.31	16.72	7.87
16X 7X .438/ .656T	39.41	616.4	112.3	1701.8	5.1	2.8	15.1	11.59	16.66	7.84
16X 8X .438/ .594T	39.95	619.6	115.0	1731.0	5.2	2.8	15.0	11.75	16.59	7.81
16X 9X .438/ .531T	40.05	619.3	115.7	1733.1	5.2	2.8	15.0	11.78	16.53	7.79
16X 7X .438/ .719T	40.90	629.6	119.4	1803.1	5.3	2.9	15.1	12.03	16.72	7.87
16X 8X .438/ .656T	41.65	634.0	123.0	1844.9	5.3	2.9	15.0	12.25	16.66	7.84
18X 5X .500/ .656T	41.75	663.3	113.1	1923.3	5.4	2.9	17.0	12.28	18.66	9.96
16X 9X .438/ .594T	41.96	635.1	124.7	1859.2	5.3	2.9	14.9	12.34	16.59	7.81
16X 5X .500/ .815T	42.09	614.3	113.1	1731.4	5.1	2.8	15.3	12.38	16.88	9.07
18X 6X .500/ .594T	42.70	672.9	118.5	1999.7	5.5	3.0	16.9	12.56	18.59	9.92
18X 5X .500/ .719T	42.81	675.6	118.5	2013.6	5.5	3.0	17.0	12.59	18.72	9.99
14X 10X .438/ .656T	43.15	578.4	123.2	1612.8	4.9	2.8	13.1	12.63	14.66	6.97
16X 8X .438/ .719T	43.35	647.1	130.9	1956.8	5.5	3.0	14.9	12.75	16.72	7.87
16X 9X .438/ .656T	43.89	649.4	133.6	1984.6	5.5	3.1	14.9	12.91	16.66	7.84
18X 6X .500/ .656T	44.00	686.5	125.8	2105.2	5.6	3.1	16.8	12.94	18.66	9.96
16X 10X .438/ .594T	44.00	649.1	134.4	1986.6	5.5	3.1	13.0	12.94	16.59	7.81
14X 11X .438/ .656T	45.36	581.7	132.4	1715.2	5.1	3.0	13.0	13.34	14.66	6.97
16X 9X .438/ .719T	45.80	662.9	142.2	2109.7	5.6	3.2	14.8	13.47	16.72	7.87
16X 10X .438/ .656T	46.10	663.3	144.2	2121.5	5.6	3.2	14.7	13.56	16.66	7.84
18X 7X .500/ .719T	47.70	720.3	144.6	2404.2	6.0	3.3	16.6	14.03	18.72	9.99
18X 6X .500/ .815T	48.45	728.7	147.9	2475.3	6.1	3.4	16.7	14.25	18.88	10.87
18X 8X .500/ .719T	50.15	738.5	157.5	2592.8	6.2	3.5	16.5	14.75	18.72	9.99
18X 9X .500/ .656T	50.69	741.2	160.6	2627.6	6.2	3.5	16.4	14.91	18.66	9.96
18X 10X .500/ .594T	50.80	740.8	161.4	2629.7	6.2	3.5	16.3	14.94	18.59	9.92
18X 7X .500/ .815T	51.44	749.9	163.6	2703.7	6.3	3.6	16.5	15.13	18.88	10.87
18X 9X .500/ .719T	52.60	754.5	170.3	2771.7	6.4	3.7	16.3	15.47	18.72	9.99
18X 10X .500/ .656T	52.98	755.4	172.2	2731.7	6.4	3.7	16.2	15.56	18.66	9.96
18X 8X .500/ .815T	54.40	768.6	179.4	2927.5	6.5	3.8	16.3	16.08	18.88	10.87
18X 11X .500/ .656T	55.15	768.5	184.1	2956.6	6.5	3.8	16.1	16.22	18.66	9.96
18X 11X .500/ .719T	57.49	782.4	196.4	3134.8	6.7	4.0	16.0	16.91	18.72	9.99

1.250 IN. PLATE (AREA= 53.13 SQ. IN.)

NOMINAL SIZE	SECTION MODULUS			R	VP	VF	BEAM DIMENSIONS			SHEAR AREA
	WT/FT	ZFL	ZFL				DEPTH	WEB THICK	FLANGE WIDTH	THICK
10X12X .500/ .719T	59.94	794.1	209.2	6.8	4.2	15.0	17.63	.500	12.00	.719
10X10X .500/ .075T	68.35	799.2	218.7	6.9	4.2	15.9	17.75	.500	10.00	.075
21X 8X .625/ .075T	68.44	907.2	233.8	7.7	4.7	18.4	20.13	.625	8.00	.075
21X10X .625/ .750T	78.14	915.2	244.0	7.8	4.8	18.2	20.63	.625	10.00	.750
21X 9X .625/ .075T	71.48	924.9	251.1	7.8	4.9	18.2	21.00	.625	9.00	.075
21X11X .625/ .750T	72.69	929.6	259.7	7.9	5.0	18.0	21.38	.625	11.00	.750
21X10X .625/ .075T	74.39	940.9	269.4	8.0	5.1	18.0	21.88	.625	10.00	.075
21X 9X .625/1.125T	79.05	967.6	296.2	8.3	5.5	17.9	23.25	.625	9.00	1.125
21X12X .625/ .075T	80.34	967.7	305.2	8.4	5.5	17.6	23.63	.625	12.00	.075
24X 9X .688/ .075T	82.89	1067.1	388.5	9.0	5.9	20.3	24.38	.688	9.00	.075
21X13X .625/ .075T	83.30	979.5	323.3	8.5	5.7	17.4	24.50	.625	13.00	.075
24X10X .688/ .075T	85.95	1084.1	328.0	9.2	6.1	20.0	25.25	.688	10.00	.075
21X14X .625/ .075T	86.29	990.1	341.3	8.6	5.9	17.2	25.38	.625	14.00	.075
24X 8X .688/1.125T	86.78	1093.3	332.8	9.3	6.2	20.2	25.50	.688	8.00	1.125
24X11X .688/ .075T	88.84	1099.6	349.2	9.3	6.3	19.8	26.13	.688	11.00	.075
24X 9X .688/1.125T	90.54	1113.0	359.2	9.5	6.4	19.9	26.63	.688	9.00	1.125
24X12X .688/ .075T	91.88	1114.0	369.7	9.5	6.5	19.6	27.00	.688	12.00	.075
24X13X .688/ .075T	94.79	1127.1	398.1	9.7	6.7	19.4	27.88	.688	13.00	.075
24X11X .688/1.125T	98.19	1145.8	411.1	9.9	7.0	19.4	28.00	.688	11.00	1.125
27X 8X .750/1.125T	99.45	1230.2	400.6	10.4	7.2	22.2	29.25	.750	8.00	1.125
27X11X .750/ .075T	101.59	1246.5	418.8	10.5	7.3	21.8	29.88	.750	11.00	.075
27X 9X .750/1.125T	103.29	1268.4	429.7	10.6	7.5	21.9	30.38	.750	9.00	1.125
27X12X .750/ .075T	104.55	1262.1	441.5	10.7	7.5	21.6	30.75	.750	12.00	.075
27X10X .750/1.125T	107.18	1279.3	458.5	10.8	7.8	21.6	31.50	.750	10.00	1.125
27X11X .750/1.125T	110.94	1296.6	487.5	11.0	8.0	21.4	32.63	.750	11.00	1.125
27X 9X .875/1.375T	122.40	1304.5	507.7	11.0	8.3	21.3	36.00	.875	9.00	1.375
30X10X .875/1.375T	136.08	1479.1	621.3	12.4	9.7	23.0	40.00	.875	10.00	1.375
30X13X .875/1.125T	138.99	1486.5	649.1	12.5	9.8	22.5	40.88	.875	13.00	1.125
30X11X .875/1.375T	140.69	1490.4	659.8	12.6	10.0	22.7	41.38	.875	11.00	1.375
30X14X .875/1.125T	142.88	1501.5	688.9	12.6	10.1	22.3	42.00	.875	14.00	1.125
30X10X .875/1.375T	154.78	1547.4	775.8	13.1	10.9	21.7	45.50	.875	14.00	1.375
33X10X1.000/1.500T	163.20	1666.9	771.6	13.7	11.3	24.4	48.13	1.000	10.00	1.500
33X11X1.000/1.375T	163.64	1666.1	777.0	13.7	11.3	24.3	48.13	1.000	11.00	1.375
36X13X1.000/1.125T	172.14	1816.3	859.6	14.7	12.3	26.1	50.63	1.000	13.00	1.125
33X13X1.000/1.375T	172.99	1784.0	868.7	14.8	12.0	23.7	50.88	1.000	13.00	1.375
36X11X1.000/1.375T	173.84	1829.7	872.3	14.8	12.5	26.2	51.13	1.000	11.00	1.375
36X10X1.000/1.750T	181.90	1873.7	944.8	15.2	13.1	25.9	53.50	1.000	10.00	1.750
33X16X1.000/1.375T	187.88	1751.1	986.8	14.4	12.0	22.8	55.88	1.000	16.00	1.375

1.2500 - 1 1/4 in.



1.375 IN. PLATE (AREA= 64.28 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				R	VP	VF	***** BEAM DIMENSIONS *****				SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	DEPTH	WEB THICK				FLANGE THICK	WIDTH			
3X 2X .125/.188	2.55	24.3	4.6	17.5	.5	.7	3.8	.75	.125	2.00	.188	.57	
4X 2X .125/.188	2.99	31.1	4.7	22.9	.6	.7	4.8	.86	.125	2.00	.188	.70	
3X 3X .125/.188	3.20	27.6	5.3	28.2	.6	.7	3.8	.94	.125	3.00	.188	.57	
4X 3X .125/.188	3.60	36.0	5.6	27.8	.6	.7	4.8	1.06	.125	3.00	.188	.70	
4X 2X .188/.313	4.69	40.4	6.3	38.9	.7	.8	4.9	1.38	.188	2.00	.313	1.07	
5X 2X .188/.250	4.90	48.9	6.5	38.0	.8	.8	5.8	1.44	.188	2.00	.250	1.25	
3X 3X .188/.313	5.10	35.2	6.8	26.8	.6	.8	3.9	1.50	.188	3.00	.313	.80	
5X 2X .188/.313	5.30	53.6	7.2	42.2	.8	.8	5.9	1.56	.188	2.00	.313	1.26	
6X 2X .188/.313	5.95	70.0	8.3	57.1	.9	.8	6.9	1.75	.188	2.00	.313	1.44	
6X 3X .188/.250	6.39	75.5	9.2	62.5	1.0	.8	6.8	1.88	.188	3.00	.250	1.43	
5X 4X .188/.250	6.60	66.1	9.3	54.2	.9	.8	5.8	1.94	.188	4.00	.250	1.25	
4X 4X .188/.313	6.80	55.5	9.2	44.9	.8	.8	4.9	2.00	.188	4.00	.313	1.07	
6X 3X .188/.313	7.00	83.0	10.4	78.9	1.0	.8	6.8	2.06	.188	3.00	.313	1.44	
6X 4X .188/.250	7.24	86.3	10.9	73.6	1.1	.9	5.8	2.13	.188	4.00	.250	1.43	
5X 4X .188/.313	7.45	74.5	10.7	62.8	1.0	.8	5.8	2.19	.188	4.00	.313	1.26	
6X 4X .188/.313	8.09	96.8	12.5	85.1	1.1	.9	5.8	2.38	.188	4.00	.313	1.44	
5X 5X .188/.313	8.50	83.7	12.5	72.8	1.0	.9	5.8	2.50	.188	5.00	.313	1.26	
7X 3X .250/.313	9.15	113.1	13.2	102.6	1.2	.9	7.8	2.69	.250	3.00	.313	2.17	
6X 3X .250/.438	9.55	104.3	13.7	94.4	1.2	.9	6.9	2.81	.250	3.00	.438	1.95	
7X 3X .250/.375	9.79	122.7	14.6	113.9	1.3	.9	7.8	2.88	.250	3.00	.375	2.19	
8X 3X .250/.313	10.00	140.6	15.3	128.4	1.4	1.0	8.7	2.94	.250	3.00	.313	2.42	
7X 4X .250/.313	10.20	127.8	15.5	125.1	1.4	1.0	7.9	3.00	.250	4.00	.313	2.17	
7X 3X .250/.438	10.40	131.7	15.9	125.1	1.4	1.0	7.9	3.06	.250	3.00	.438	2.20	
8X 3X .250/.375	10.64	151.8	16.9	148.1	1.5	1.0	8.8	3.13	.250	3.00	.375	2.44	
9X 3X .250/.313	10.85	170.7	17.6	170.3	1.6	1.0	9.7	3.19	.250	3.00	.313	2.67	
8X 4X .250/.313	11.05	158.0	18.0	156.4	1.5	1.0	8.7	3.25	.250	4.00	.313	2.42	
7X 5X .250/.313	11.25	141.5	17.9	138.2	1.4	1.0	7.7	3.31	.250	5.00	.313	2.17	
8X 3X .250/.438	11.25	162.3	18.4	162.2	1.5	1.0	8.8	3.31	.250	3.00	.438	2.45	
9X 3X .250/.375	11.49	183.5	19.3	180.0	1.7	1.0	9.7	3.38	.250	3.00	.375	2.69	
9X 4X .250/.313	11.90	190.5	20.6	198.4	1.7	1.0	9.6	3.50	.250	4.00	.313	2.67	
9X 3X .250/.438	12.10	195.7	21.1	205.7	1.7	1.1	9.8	3.56	.250	3.00	.438	2.70	
8X 5X .250/.313	12.18	173.7	20.7	178.8	1.6	1.0	8.7	3.56	.250	5.00	.313	2.42	
9X 4X .250/.375	12.75	206.2	23.0	222.1	1.8	1.1	9.7	3.75	.250	4.00	.375	2.69	
9X 5X .250/.313	12.95	208.8	23.6	226.5	1.8	1.1	9.6	3.81	.250	5.00	.313	2.67	
8X 5X .250/.438	13.19	189.7	23.4	202.9	1.7	1.1	8.7	3.88	.250	5.00	.438	2.44	
7X 5X .250/.375	13.40	167.9	22.7	176.1	1.6	1.0	7.8	3.94	.250	5.00	.375	2.20	
9X 4X .250/.438	13.60	220.3	25.3	245.0	1.9	1.1	9.7	4.00	.250	4.00	.438	2.70	
9X 5X .250/.313	14.04	226.4	26.6	255.6	1.9	1.1	9.6	4.13	.250	5.00	.313	2.69	
8X 5X .250/.438	14.25	203.8	26.0	226.0	1.8	1.1	8.7	4.19	.250	5.00	.438	2.45	
8X 6X .250/.375	14.45	205.8	26.6	228.6	1.8	1.1	8.6	4.25	.250	6.00	.375	2.44	
7X 6X .250/.438	14.89	183.0	26.0	208.7	1.7	1.1	7.7	4.38	.250	6.00	.438	2.20	
9X 5X .250/.438	15.10	242.7	29.5	284.7	2.0	1.2	9.6	4.44	.250	5.00	.438	2.70	
9X 6X .250/.375	15.30	244.4	30.1	289.3	2.0	1.2	9.6	4.50	.250	6.00	.375	2.69	
10X 4X .313/.375	15.74	251.9	28.2	297.9	2.1	1.2	10.6	4.63	.313	4.00	.375	3.68	
8X 6X .250/.438	15.74	221.3	29.7	257.4	1.9	1.2	8.7	4.63	.250	6.00	.438	2.45	

1.3750 - 1 3/8 in.

1.375 IN. PLATE (AREA= 64.28 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		R	YP	YF	***** BEAM DIMENSIONS *****		SHEAR AREA
7X 7X .250/ .438T	WT/FT	ZPL	ZFL				AREA	DEPTH	
10X 4X .313/ .438T	16.35	196.8	29.4	1.8	1.1	7.7	4.81	7.44	.250
9X 6X .250/ .438T	16.59	266.9	30.8	2.2	1.2	9.6	4.88	10.44	.313
10X 5X .313/ .375T	17.00	273.1	32.2	2.2	1.2	10.5	5.00	10.38	.250
8X 7X .250/ .438T	17.20	236.9	33.5	2.0	1.2	8.6	5.06	8.44	.313
10X 4X .313/ .500T	17.44	281.3	33.4	2.3	1.3	10.6	5.13	10.50	.250
9X 7X .250/ .438T	18.05	279.6	37.9	2.3	1.3	9.5	5.31	9.44	.313
10X 6X .313/ .375T	18.29	292.0	36.1	2.3	1.3	10.5	5.38	10.38	.250
10X 5X .313/ .500T	19.14	305.5	38.6	2.4	1.3	10.5	5.63	10.50	.313
10X 6X .313/ .438T	19.55	310.1	40.0	2.4	1.3	10.5	5.75	10.44	.250
10X 5X .313/ .563T	20.20	320.3	41.9	2.5	1.4	10.6	5.94	10.56	.313
10X 6X .313/ .500T	20.84	327.1	43.9	2.6	1.4	10.5	6.13	10.50	.250
10X 7X .313/ .438T	21.05	328.4	44.6	2.6	1.4	10.4	6.13	10.44	.313
9X 7X .313/ .500T	21.45	299.7	43.8	2.4	1.4	9.5	6.31	9.50	.250
12X 4X .375/ .469T	21.69	368.5	43.3	2.7	1.5	12.4	6.38	12.47	.313
10X 6X .313/ .563T	22.10	342.7	47.8	2.7	1.5	10.5	6.50	10.56	.250
10X 7X .313/ .500T	22.54	346.1	49.2	2.7	1.5	10.4	6.63	10.50	.313
12X 4X .375/ .531T	22.54	383.5	46.4	2.8	1.5	12.4	6.63	12.53	.250
9X 8X .313/ .563T	22.95	315.1	48.0	2.5	1.4	9.5	6.75	9.56	.313
9X 8X .313/ .500T	23.15	315.7	48.6	2.5	1.5	9.4	6.81	9.50	.250
12X 5X .375/ .469T	23.26	394.3	49.2	2.9	1.5	12.3	6.84	12.47	.313
23.39	397.8	49.5	61.4	2.9	1.5	12.4	6.88	12.59	.250
10X 7X .313/ .563T	24.00	362.2	53.7	2.8	1.5	10.4	7.06	10.56	.313
24.24	363.5	54.6	58.3	2.8	1.5	10.3	7.13	10.50	.250
10X 8X .313/ .500T	24.24	410.9	52.4	3.0	1.6	12.4	7.13	12.66	.313
12X 4X .375/ .563T	24.45	331.1	53.3	2.6	1.5	9.4	7.31	9.56	.250
9X 8X .313/ .563T	24.85	416.9	55.1	3.1	1.6	12.2	7.31	12.47	.313
12X 6X .375/ .469T	25.40	425.8	56.8	3.1	1.6	12.3	7.47	12.59	.250
10X 8X .313/ .563T	25.94	380.3	59.8	2.9	1.6	10.3	7.63	10.56	.313
12X 5X .375/ .656T	26.45	440.5	60.6	3.2	1.7	12.3	7.78	12.66	.250
12X 7X .375/ .469T	26.45	437.2	60.9	3.2	1.7	12.2	7.78	12.47	.313
12X 6X .375/ .594T	27.40	450.5	64.2	3.3	1.7	12.2	8.06	12.59	.250
12X 7X .375/ .531T	27.95	455.8	66.4	3.3	1.8	12.1	8.22	12.53	.313
12X 6X .375/ .656T	28.70	465.8	58.8	3.4	1.8	12.2	8.44	12.66	.250
12X 7X .375/ .594T	29.44	472.3	71.7	3.5	1.8	12.1	8.66	12.59	.313
12X 8X .375/ .531T	29.75	474.3	72.9	3.5	1.9	12.1	8.75	12.53	.250
14X 5X .438/ .531T	29.85	513.5	68.7	3.6	1.9	14.0	8.78	14.53	.313
14X 5X .438/ .594T	30.91	529.2	73.0	3.7	1.9	14.0	9.09	14.59	.250
12X 8X .375/ .594T	31.45	491.6	79.1	3.6	1.9	12.0	9.25	12.59	.313
12X 9X .375/ .531T	31.55	491.5	79.6	3.6	1.9	12.0	9.28	12.53	.250
14X 6X .438/ .531T	31.65	538.4	76.3	3.8	2.0	13.9	9.31	14.53	.313
14X 5X .438/ .563T	31.99	544.6	77.4	3.8	2.0	14.0	9.41	14.66	.250
16X 5X .438/ .531T	32.84	613.2	82.3	4.2	2.1	15.8	9.66	16.53	.313
14X 6X .438/ .594T	32.95	555.0	81.6	3.9	2.0	13.9	9.69	14.59	.250
14X 5X .438/ .719T	33.05	558.6	81.7	3.9	2.1	14.0	9.72	14.72	.313

1.3750 - 1 3/8 in.



1.375 IN. PLATE (AREA= 64.28 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	V <sup>F</sup>	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL							WEB THICK	FLANGE WIDTH	THICK	
12X 8X .375/.556T	33.15	507.8	85.3	1024.5	3.7	2.0	12.0	9.75	12.66	.375	8.00	.656	5.26
14X 7X .438/.531T	33.46	560.6	94.0	1162.1	4.0	2.1	13.8	9.84	14.53	.438	7.00	.531	6.97
16X 5X .438/.594T	33.30	630.3	87.3	1377.5	4.3	2.2	15.8	9.97	16.59	.438	5.00	.594	7.87
14X 6X .438/.656T	34.20	571.1	86.8	1208.6	4.0	2.1	13.9	10.06	14.66	.438	6.00	.656	7.02
16X 6X .438/.531T	34.65	640.1	91.1	1427.9	4.4	2.2	15.7	10.19	16.53	.438	6.00	.531	7.84
16X 5X .438/.656T	34.95	646.4	92.2	1455.7	4.4	2.3	15.8	10.28	16.66	.438	5.00	.656	7.90
14X 7X .438/.594T	34.95	578.0	90.1	1245.0	4.1	2.2	13.8	10.28	14.59	.438	7.00	.594	6.99
14X 8X .438/.531T	35.23	580.4	91.7	1259.7	4.1	2.2	13.7	10.38	14.53	.438	8.00	.531	6.97
16X 6X .438/.594T	35.90	658.1	97.0	1519.0	4.5	2.3	15.7	10.56	16.59	.438	6.00	.594	7.87
16X 5X .438/.719T	36.01	661.7	97.2	1533.7	4.5	2.3	15.8	10.59	16.72	.438	5.00	.719	7.93
16X 7X .438/.531T	36.45	663.7	99.8	1552.8	4.6	2.3	15.6	10.72	16.53	.438	7.00	.531	7.84
14X 8X .438/.594T	36.99	598.4	98.8	1353.7	4.2	2.3	13.7	10.88	14.59	.438	8.00	.594	6.99
14X 9X .438/.531T	37.09	598.3	99.4	1355.6	4.2	2.3	13.6	10.91	14.53	.438	9.00	.531	6.97
16X 7X .438/.594T	37.94	682.4	106.7	1658.1	4.7	2.4	15.5	11.16	16.59	.438	7.00	.594	7.87
16X 6X .438/.531T	38.25	684.8	108.4	1675.1	4.7	2.4	15.5	11.25	16.53	.438	8.00	.531	7.84
16X 8X .438/.719T	38.45	691.0	109.0	1703.0	4.7	2.5	15.6	11.31	16.72	.438	6.00	.719	7.93
16X 7X .438/.656T	39.41	700.0	113.6	1763.1	4.8	2.5	15.5	11.59	16.66	.438	7.00	.656	7.90
16X 8X .438/.594T	39.95	704.1	116.4	1793.9	4.9	2.5	15.4	11.75	16.59	.438	8.00	.594	7.87
16X 9X .438/.531T	40.05	703.9	117.0	1796.2	4.9	2.6	15.4	11.78	16.53	.438	9.00	.531	7.84
16X 7X .438/.719T	40.90	716.6	120.7	1869.4	4.9	2.6	15.5	12.03	16.72	.438	7.00	.719	7.93
16X 8X .438/.656T	41.65	722.3	124.4	1913.6	5.0	2.6	15.4	12.25	16.66	.438	8.00	.656	7.90
18X 5X .500/.656T	41.75	754.1	114.5	1991.5	5.1	2.6	17.4	12.28	18.66	.500	5.00	.656	10.02
16X 9X .438/.594T	41.96	723.8	126.1	1928.8	5.0	2.7	15.3	12.34	16.59	.438	9.00	.594	7.87
16X 5X .500/.875T	42.09	698.2	114.5	1795.6	4.8	2.6	15.7	12.38	16.88	.500	5.00	.875	9.13
18X 6X .500/.594T	42.70	766.2	119.9	2070.6	5.2	2.7	17.3	12.56	18.59	.500	6.00	.594	9.90
18X 5X .500/.719T	42.81	769.3	120.0	2085.9	5.2	2.7	17.4	12.59	18.72	.500	5.00	.719	10.05
14X10X .438/.656T	43.15	649.9	124.6	1676.6	4.7	2.6	13.5	12.69	14.66	.438	10.00	.656	7.02
16X 8X .438/.719T	43.35	738.9	132.4	2031.5	5.1	2.7	15.3	12.75	16.72	.438	8.00	.719	7.93
16X 9X .438/.656T	43.89	742.0	135.1	2051.0	5.2	2.8	15.3	12.91	16.66	.438	9.00	.656	7.90
18X 6X .500/.556T	44.00	783.0	126.5	2182.1	5.3	2.8	17.2	12.94	18.66	.500	6.00	.556	10.02
16X10X .438/.594T	44.00	741.7	135.9	2083.2	5.2	2.8	15.2	12.94	16.59	.438	10.00	.594	7.87
14X11X .438/.556T	45.36	664.5	133.9	1787.1	4.8	2.7	13.3	13.34	14.66	.438	11.00	.556	7.02
16X 9X .438/.719T	45.80	759.1	144.2	2193.0	5.3	2.9	15.2	13.47	16.72	.438	9.00	.719	7.93
16X10X .438/.656T	46.10	759.8	145.8	2205.7	5.3	2.9	15.1	13.56	16.66	.438	10.00	.656	7.90
18X 7X .500/.719T	47.70	825.3	146.3	2496.6	5.6	3.0	17.1	14.03	18.72	.500	7.00	.719	10.05
18X 6X .500/.594T	48.45	835.7	149.7	2571.2	5.7	3.1	17.2	14.25	18.88	.500	6.00	.594	10.13
18X 8X .500/.719T	50.15	848.3	159.3	2694.9	5.8	3.2	16.9	14.75	18.72	.500	8.00	.719	10.05
18X 9X .500/.656T	50.69	851.8	162.4	2732.7	5.9	3.2	16.8	14.91	18.66	.500	9.00	.656	10.02
18X10X .500/.594T	50.80	851.5	163.3	2735.2	5.9	3.2	16.8	14.94	18.59	.500	10.00	.594	9.90
18X 7X .500/.875T	51.44	862.5	165.5	2812.7	6.0	3.3	17.0	15.13	18.88	.500	7.00	.875	10.13
18X 9X .500/.719T	52.60	868.7	172.2	2888.6	6.0	3.3	16.8	15.47	18.72	.500	9.00	.719	10.05
18X10X .500/.656T	52.90	869.9	174.1	2906.7	6.0	3.3	16.7	15.56	18.66	.500	10.00	.656	10.02
18X 8X .500/.875T	54.40	886.3	181.4	3050.2	6.2	3.4	16.8	16.00	18.88	.500	8.00	.875	10.13
18X11X .500/.656T	55.15	886.7	186.1	3091.9	6.2	3.5	16.6	16.22	18.66	.500	11.00	.656	10.02
18X11X .500/.719T	57.49	904.4	198.5	3271.6	6.3	3.6	16.5	16.91	18.72	.500	11.00	.719	10.05

1.3750 - 1 3/8 in.

1.375 IN. PLATE (AREA= 64.28 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA
	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	THICK	
10X12X .500/.719T	59.94	919.5	211.5	3455.7	6.5	3.0	16.3	17.63	10.72	.500	12.00	.719	.719	10.05
10X10X .500/.875T	60.35	925.6	213.1	3508.1	6.5	3.0	16.5	17.75	10.88	.500	10.00	.875	.875	10.13
21X 8X .625/.750T	68.44	1051.8	236.0	4482.4	7.3	4.3	19.0	20.13	21.88	.625	8.00	.875	.875	14.53
21X10X .625/.750T	70.14	1062.0	247.1	4635.9	7.4	4.4	18.0	20.63	21.75	.625	10.00	.750	.750	14.45
21X 9X .625/.875T	71.40	1073.9	254.3	4781.1	7.5	4.5	18.0	21.00	21.88	.625	9.00	.875	.875	14.53
21X11X .625/.750T	72.69	1080.1	263.0	4990.7	7.6	4.5	18.6	21.38	21.75	.625	11.00	.750	.750	14.45
21X10X .625/.875T	74.39	1094.0	272.8	5077.1	7.7	4.6	18.6	21.88	21.88	.625	10.00	.875	.875	14.53
21X 9X .625/1.125T	79.05	1127.3	299.9	5568.2	8.0	4.9	18.6	23.25	22.13	.625	9.00	1.125	1.125	14.59
21X12X .625/.875T	80.34	1127.9	309.0	5640.5	8.0	5.0	18.3	23.63	21.88	.625	13.00	.875	.875	14.53
21X 9X .688/.875T	82.89	1242.3	312.8	5661.3	8.6	5.3	21.0	24.38	24.88	.688	9.00	.875	.875	18.06
21X13X .625/.875T	83.30	1142.9	327.3	5916.5	8.2	5.2	18.1	24.50	21.88	.625	13.00	.875	.875	14.53
21X10X .688/.875T	85.05	1263.4	333.3	6324.9	8.8	5.5	20.8	25.25	24.88	.688	10.00	.875	.875	18.06
21X14X .625/.875T	86.29	1156.4	345.4	6185.5	8.3	5.3	17.9	25.38	21.88	.625	14.00	.875	.875	14.53
21X 8X .688/1.125T	86.70	1274.3	337.5	7071.7	8.9	5.5	21.0	25.50	25.13	.688	8.00	1.125	1.125	18.24
21X11X .688/.875T	88.84	1282.6	353.9	7282.5	9.0	5.7	20.6	26.13	24.88	.688	11.00	.875	.875	18.06
21X12X .688/1.125T	90.54	1298.8	364.2	7538.6	9.1	5.8	20.7	26.63	25.13	.688	9.00	1.125	1.125	18.06
21X10X .688/.875T	91.80	1300.5	374.7	7636.7	9.1	5.9	20.4	27.00	24.88	.688	12.00	.875	.875	18.06
21X13X .688/.875T	94.79	1316.0	395.4	7983.2	9.3	6.1	20.2	27.88	24.88	.688	13.00	.875	.875	18.06
21X11X .750/1.125T	98.19	1339.7	416.7	8424.4	9.5	6.3	20.2	28.88	25.13	.688	11.00	1.125	1.125	18.24
21X 8X .750/1.125T	99.45	1445.8	406.8	9366.6	10.0	6.5	23.0	29.25	28.13	.750	8.00	1.125	1.125	22.13
21X11X .750/.875T	101.59	1455.0	425.1	9624.1	10.1	6.6	22.6	29.88	27.88	.750	11.00	.875	.875	21.94
21X 9X .750/1.125T	103.29	1471.7	436.2	9927.9	10.2	6.7	22.8	30.38	28.13	.750	9.00	1.125	1.125	22.13
21X12X .750/.875T	104.55	1474.2	448.0	10051.6	10.3	6.8	22.4	30.75	27.88	.750	12.00	.875	.875	21.94
21X10X .750/1.125T	107.10	1494.9	465.4	10471.0	10.5	7.0	22.5	31.50	28.13	.750	10.00	1.125	1.125	22.13
21X11X .750/1.125T	110.94	1516.1	494.7	11005.2	10.7	7.3	22.2	32.63	28.13	.750	11.00	1.125	1.125	22.13
21X 9X .875/1.375T	122.40	1523.0	516.2	11471.8	10.7	7.5	22.2	36.00	28.38	.875	9.00	1.375	1.375	26.84
30X10X .875/1.375T	136.00	1727.7	631.9	15155.8	12.1	8.0	24.0	40.00	31.38	.875	10.00	1.375	1.375	28.66
30X13X .875/1.125T	138.99	1736.9	660.1	15466.9	12.2	9.0	23.6	40.88	31.13	.875	13.00	1.125	1.125	28.44
30X11X .875/1.375T	140.69	1751.0	671.1	15890.6	12.3	9.1	23.7	41.38	31.38	.875	11.00	1.375	1.375	28.66
30X14X .875/1.375T	142.80	1755.0	692.3	16137.0	12.3	9.2	23.3	42.00	31.38	.875	14.00	1.375	1.375	28.66
30X10X .875/1.500T	154.70	1810.3	788.9	17936.5	12.8	9.9	22.8	45.50	31.38	.875	14.00	1.375	1.375	28.66
33X10X .875/1.500T	163.20	1942.5	786.5	20084.1	13.4	10.3	25.5	48.00	34.50	1.000	10.00	1.500	1.500	35.88
33X11X .875/1.375T	163.64	1941.7	792.0	20113.1	13.4	10.4	25.4	48.13	34.38	1.000	11.00	1.375	1.375	35.76
33X13X .875/1.125T	172.14	2114.8	876.5	23861.5	14.4	11.3	27.2	50.63	37.13	1.000	13.00	1.125	1.125	36.51
33X11X .875/1.375T	172.99	1986.6	877.0	21755.3	13.7	10.9	24.8	50.88	34.38	1.000	13.00	1.375	1.375	35.76
33X11X .875/1.375T	173.84	2130.4	889.7	24321.9	14.5	11.4	27.3	51.13	37.38	1.000	11.00	1.375	1.375	36.76
33X10X .875/1.500T	181.90	2182.2	962.9	26139.5	14.9	12.0	27.1	53.50	37.75	1.000	10.00	1.750	1.750	39.13
33X16X .875/1.375T	187.00	2043.0	1004.4	24076.4	14.2	11.8	24.0	55.00	34.38	1.000	16.00	1.375	1.375	35.76

1.3750 - 1 3/8 in.



1.500 IN. PLATE (AREA= 76.50 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****										SHEAR AREA
3X 2X	125/ .188T	WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	AREA	
3X 2X	.125/ .188T	2.55	28.3	5.6	22.1	.5	.8	3.9	.75	3.19	.125	2.00	.188	.188	.59	
4X 2X	.125/ .188T	2.99	34.8	5.6	27.5	.6	.8	4.9	.88	4.19	.125	2.00	.188	.188	.71	
3X 3X	.125/ .188T	3.20	31.4	6.4	24.8	.6	.8	3.9	.94	3.19	.125	3.00	.188	.188	.59	
4X 3X	.125/ .188T	3.60	39.5	6.5	31.7	.6	.8	4.9	1.06	4.19	.125	3.00	.188	.188	.71	
4X 2X	.188/ .313T	4.69	43.9	7.2	35.8	.7	.8	5.0	1.38	4.31	.188	2.00	.313	.313	1.09	
5X 2X	.188/ .250T	4.90	52.0	7.3	43.0	.7	.8	5.9	1.44	5.25	.188	2.00	.250	.250	1.27	
3X 3X	.188/ .313T	5.10	38.9	7.9	31.7	.6	.8	4.0	1.50	3.31	.188	3.00	.313	.313	.90	
5X 2X	.188/ .313T	5.30	56.6	7.9	47.3	.8	.8	6.0	1.56	5.31	.188	2.00	.313	.313	1.28	
6X 2X	.188/ .313T	5.95	72.7	9.0	62.5	.9	.9	7.0	1.75	6.31	.188	2.00	.313	.313	1.47	
6X 3X	.188/ .250T	6.39	78.2	9.9	68.0	.9	.9	6.9	1.88	6.25	.188	3.00	.250	.250	1.46	
5X 4X	.188/ .250T	6.60	69.1	10.1	59.7	.9	.9	5.9	1.94	5.25	.188	4.00	.250	.250	1.27	
4X 4X	.188/ .313T	6.80	58.9	10.2	50.3	.8	.9	5.0	2.00	4.31	.188	4.00	.313	.313	1.09	
6X 3X	.188/ .313T	7.00	86.6	11.1	76.7	1.0	.9	6.9	2.06	6.31	.188	3.00	.313	.313	1.47	
6X 4X	.188/ .250T	7.24	89.1	11.6	79.4	1.0	.9	6.9	2.13	6.25	.188	4.00	.250	.250	1.46	
6X 4X	.188/ .313T	7.45	77.6	11.6	68.5	.9	.9	5.9	2.19	5.31	.188	4.00	.313	.313	1.28	
6X 4X	.188/ .313T	8.09	99.9	13.2	91.2	1.1	.9	6.9	2.38	6.31	.188	4.00	.313	.313	1.47	
5X 5X	.188/ .313T	8.50	87.0	13.3	78.8	1.0	.9	5.9	2.50	5.31	.188	5.00	.313	.313	1.28	
7X 3X	.250/ .313T	9.15	116.3	13.9	109.1	1.2	.9	7.9	2.69	7.31	.250	3.00	.313	.313	1.99	
6X 3X	.250/ .438T	9.55	107.7	14.4	100.9	1.1	.9	7.0	2.81	6.44	.250	3.00	.375	.375	1.99	
7X 3X	.250/ .375T	9.79	126.2	15.2	120.7	1.2	1.0	7.9	2.88	7.38	.250	3.00	.375	.375	2.22	
8X 3X	.250/ .313T	10.00	144.3	15.9	140.7	1.3	1.0	8.8	2.94	8.31	.250	3.00	.313	.313	2.45	
7X 4X	.250/ .313T	10.20	131.6	16.2	127.4	1.3	1.0	7.8	3.00	7.31	.250	4.00	.313	.313	2.20	
7X 3X	.250/ .438T	10.40	135.6	16.6	132.2	1.3	1.0	8.0	3.06	7.44	.250	3.00	.438	.438	2.24	
8X 3X	.250/ .375T	10.64	156.1	17.5	155.5	1.4	1.0	8.9	3.13	8.38	.250	3.00	.375	.375	2.47	
9X 3X	.250/ .313T	10.85	175.4	18.2	178.0	1.5	1.0	9.8	3.19	9.31	.250	3.00	.313	.313	2.70	
8X 4X	.250/ .313T	11.05	162.6	18.6	164.1	1.4	1.0	8.8	3.25	8.31	.250	4.00	.313	.313	2.45	
7X 5X	.250/ .313T	11.25	146.0	18.6	145.6	1.4	1.0	7.8	3.31	7.31	.250	5.00	.313	.313	2.20	
8X 3X	.250/ .438T	11.25	167.2	19.0	169.9	1.5	1.0	8.9	3.31	8.44	.250	3.00	.438	.438	2.49	
9X 3X	.250/ .375T	11.49	189.0	19.9	196.2	1.6	1.0	9.8	3.38	9.38	.250	3.00	.375	.375	2.72	
9X 4X	.250/ .313T	11.90	196.5	21.2	206.8	1.6	1.1	9.8	3.50	9.31	.250	4.00	.313	.313	2.70	
9X 3X	.250/ .438T	12.10	202.0	21.7	214.3	1.6	1.1	9.9	3.56	9.44	.250	3.00	.438	.438	2.74	
8X 5X	.250/ .313T	12.10	179.4	21.3	187.0	1.5	1.0	8.8	3.56	8.31	.250	5.00	.313	.313	2.45	
9X 4X	.250/ .375T	12.75	213.3	23.6	231.1	1.7	1.1	9.8	3.75	9.38	.250	4.00	.375	.375	2.72	
9X 5X	.250/ .313T	12.95	216.2	24.2	235.6	1.7	1.1	9.7	3.81	9.31	.250	5.00	.313	.313	2.70	
8X 5X	.250/ .375T	13.19	196.6	24.1	211.8	1.6	1.1	8.8	3.88	8.38	.250	5.00	.375	.375	2.47	
7X 5X	.250/ .438T	13.40	174.2	23.4	184.6	1.5	1.1	7.9	3.94	7.44	.250	5.00	.438	.438	2.24	
9X 4X	.250/ .438T	13.60	220.7	25.9	254.6	1.8	1.1	9.8	4.00	9.44	.250	4.00	.438	.438	2.74	
9X 5X	.250/ .375T	14.04	235.3	27.2	265.5	1.8	1.1	9.8	4.13	9.38	.250	5.00	.375	.375	2.72	
8X 5X	.250/ .438T	14.25	212.0	26.7	235.5	1.7	1.1	8.8	4.19	8.44	.250	5.00	.438	.438	2.49	
8X 6X	.250/ .375T	14.45	214.2	27.3	239.2	1.7	1.1	8.8	4.25	8.38	.250	6.00	.375	.375	2.47	
7X 6X	.250/ .438T	14.89	190.8	26.8	210.0	1.6	1.1	7.8	4.38	7.44	.250	6.00	.438	.438	2.24	
9X 5X	.250/ .438T	15.10	253.3	30.2	295.4	1.9	1.2	9.8	4.44	9.44	.250	5.00	.438	.438	2.74	
9X 6X	.250/ .375T	15.30	255.3	30.8	299.1	1.9	1.2	9.7	4.50	9.38	.250	6.00	.375	.375	2.72	
10X 4X	.313/ .375T	15.74	262.9	28.8	308.7	2.0	1.2	10.7	4.63	10.38	.313	4.00	.375	.375	3.72	
8X 6X	.250/ .438T	15.74	231.4	30.5	267.8	1.8	1.2	8.8	4.63	8.44	.250	6.00	.438	.438	2.49	

1.5000 - 1 1/2 in.

AD-A048 989

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 11/6  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HIGH-STRENGTH STEELS --ETC(U)  
DEC 77 S F ZEMANEK, N S NAPPI

UNCLASSIFIED

DTNSRDC-77-0069

NL

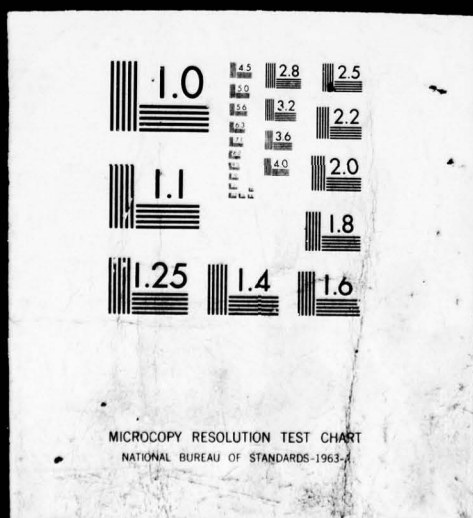
3 OF 5

AD  
A048989





3 OF 5  
AD  
A048989



.....

1.5000 - 1 1/2 in.



1.500 IN. PLATE (AREA= 76.50 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YP	V <sup>2</sup>	AREA	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL						DEPTH	WEB THICK	FLANGE WIDTH	
12X 8X .375/.6561	33.15	557.4	86.3	1050.2	3.5	1.9	12.3	9.75	.375	8.00	.656	5.31
14X 7X .438/.5311	33.46	615.3	85.1	1197.9	3.7	1.9	14.1	9.84	.438	7.00	.531	7.02
16X 5X .438/.5941	33.90	693.7	88.3	1417.6	4.0	2.0	16.0	9.97	.438	5.00	.594	7.92
14X 6X .438/.6561	34.20	627.9	87.9	1246.0	3.8	2.0	14.2	10.06	.438	6.00	.656	7.08
16X 6X .438/.5311	34.55	705.6	92.2	1469.8	4.1	2.1	15.9	10.19	.438	6.00	.531	7.90
16X 5X .438/.6561	34.95	713.0	93.3	1498.5	4.2	2.1	16.1	10.28	.438	5.00	.656	7.95
14X 7X .438/.5941	34.95	636.4	91.2	1283.9	3.8	2.0	14.1	10.28	.438	7.00	.594	7.05
14X 8X .438/.5311	35.29	639.4	92.8	1299.2	3.9	2.0	14.0	10.38	.438	8.00	.531	7.02
16X 6X .438/.5941	35.90	727.2	98.1	1564.2	4.2	2.2	15.9	10.56	.438	6.00	.594	7.92
16X 5X .438/.7191	36.01	731.4	98.3	1579.3	4.3	2.2	16.1	10.59	.438	5.00	.719	7.98
16X 7X .438/.5311	36.45	734.2	100.9	1599.3	4.3	2.2	15.9	10.72	.438	7.00	.531	7.90
16X 8X .438/.5941	36.99	661.4	99.9	1397.0	4.0	2.1	14.0	10.88	.438	8.00	.594	7.05
14X 8X .438/.5311	37.09	661.3	100.5	1399.0	4.0	2.1	13.9	10.91	.438	9.00	.531	7.02
16X 7X .438/.5941	37.94	756.9	107.9	1708.6	4.4	2.3	15.8	11.16	.438	7.00	.594	7.92
16X 8X .438/.5311	38.25	759.9	109.6	1726.3	4.4	2.3	15.8	11.25	.438	8.00	.531	7.90
16X 6X .438/.7191	38.45	767.1	110.2	1755.1	4.5	2.3	15.9	11.31	.438	6.00	.719	7.98
16X 7X .438/.6561	39.41	778.3	114.9	1817.7	4.5	2.3	15.8	11.59	.438	7.00	.656	7.95
16X 8X .438/.5941	39.95	783.5	117.6	1849.9	4.6	2.4	15.7	11.75	.438	8.00	.594	7.92
16X 9X .438/.5311	40.05	783.4	118.2	1852.4	4.6	2.4	15.7	11.78	.438	9.00	.531	7.90
16X 7X .438/.7191	40.90	798.6	122.0	1928.4	4.7	2.4	15.8	12.03	.438	7.00	.719	7.98
16X 8X .438/.6561	41.65	805.8	125.7	1974.6	4.7	2.5	15.7	12.25	.438	8.00	.656	7.95
18X 5X .500/.6561	41.75	840.0	115.8	2052.0	4.8	2.4	17.7	12.28	.500	5.00	.656	10.08
16X 9X .438/.5941	41.96	807.8	127.4	1990.5	4.7	2.5	15.6	12.34	.438	9.00	.594	7.92
16X 5X .500/.8751	42.09	777.2	115.8	1852.8	4.6	2.4	16.0	12.38	.500	5.00	.875	9.19
16X 6X .500/.5941	42.70	854.6	121.3	2134.2	4.9	2.5	17.6	12.56	.500	6.00	.594	10.05
18X 5X .500/.7191	42.81	858.3	121.4	2150.1	4.9	2.5	17.7	12.59	.500	5.00	.719	10.11
14X10X .438/.6561	43.15	725.0	126.0	1734.2	4.4	2.4	13.8	12.69	.438	10.00	.656	7.08
16X 8X .438/.7191	43.35	826.3	133.8	2097.6	4.8	2.5	15.7	12.75	.438	8.00	.719	7.98
16X 9X .438/.6561	43.89	830.3	136.5	2128.6	4.9	2.6	15.6	12.91	.438	9.00	.656	7.95
18X 6X .500/.6561	44.00	875.1	127.9	2250.2	5.0	2.6	17.6	12.94	.500	6.00	.656	10.08
16X10X .438/.5941	44.00	830.1	137.3	2131.0	4.9	2.6	15.5	12.94	.438	10.00	.594	7.92
14X11X .438/.6561	45.36	743.4	135.3	1850.2	4.5	2.5	13.7	13.34	.438	11.00	.656	7.08
16X 9X .438/.7191	45.80	851.5	145.7	2266.7	5.0	2.7	15.6	13.47	.438	9.00	.719	7.98
16X10X .438/.6561	46.10	852.6	147.2	2280.1	5.0	2.7	15.5	13.56	.438	10.00	.656	7.95
18X 7X .500/.7191	47.70	926.7	147.8	2577.9	5.3	2.8	17.4	14.03	.500	7.00	.719	10.11
18X 6X .500/.8751	48.45	939.2	151.3	2655.6	5.4	2.8	17.6	14.25	.500	6.00	.875	10.19
18X 8X .500/.7191	50.15	955.2	151.0	2785.3	5.5	2.9	17.3	14.75	.500	8.00	.719	10.11
18X 9X .500/.6561	50.69	959.7	164.1	2825.1	5.6	2.9	17.2	14.91	.500	9.00	.656	10.08
18X10X .500/.5941	50.80	959.4	165.0	2827.8	5.6	2.9	17.1	14.94	.500	10.00	.594	10.05
18X 7X .500/.8751	51.44	972.5	167.3	2908.4	5.6	3.0	17.4	15.13	.500	7.00	.875	10.19
18X 9X .500/.7191	52.60	980.5	174.8	2988.4	5.7	3.0	17.2	15.47	.500	9.00	.719	10.11
18X10X .500/.6561	52.90	982.2	175.9	3007.6	5.7	3.1	17.1	15.56	.500	10.00	.656	10.08
18X 8X .500/.8751	54.40	1002.2	183.3	3157.7	5.8	3.2	17.2	16.00	.500	6.00	.875	10.19
18X11X .500/.6561	55.15	1003.2	188.0	3191.8	5.9	3.2	17.0	16.22	.500	11.00	.656	10.08
18X11X .500/.7191	57.49	1025.2	208.5	3391.3	6.0	3.3	16.9	16.91	.500	11.00	.719	10.11

1.500 IN. PLATE (AREA= 76.50 SQ.IN.)

***** BEAM DIMENSIONS *****															
NOMINAL SIZE		SECTION MODULUS				R				WEB			FLANGE		SHEAR AREA
		WT/FT	ZPL	ZFL	INERTIA		YP	VF	AREA	DEPTH	THICK	WIDTH	THICK		
18X12X .500/ .719T	59.94	1044.2	213.6	3505.8	6.2	3.4	16.8	17.63	18.72	.500	12.00	.719	10.11	10.11	
18X10X .500/ .875T	68.35	1051.6	215.2	3640.5	6.2	3.5	16.9	17.75	18.88	.500	10.00	.875	18.19	18.19	
21X 8X .625/ .875T	68.44	1197.6	238.7	4652.9	6.9	3.9	19.5	20.13	21.88	.625	8.00	.875	14.61	14.61	
21X10X .625/ .750T	70.14	1210.4	249.9	4815.4	7.0	4.0	19.3	20.63	21.75	.625	10.00	.750	14.53	14.53	
21X 9X .625/ .875T	71.40	1224.9	257.1	4968.3	7.1	4.1	19.3	21.00	21.88	.625	9.00	.875	14.61	14.61	
21X11X .625/ .750T	72.69	1232.8	265.9	5084.9	7.2	4.1	19.1	21.38	21.75	.625	11.00	.750	14.53	14.53	
21X10X .625/ .875T	74.39	1249.8	275.8	5281.8	7.3	4.2	19.2	21.88	21.88	.625	10.00	.875	14.61	14.61	
21X 9X .625/1.125T	79.05	1298.6	303.2	5802.0	7.6	4.5	19.1	23.25	22.13	.625	9.00	1.125	14.77	14.77	
21X12X .625/ .875T	80.34	1291.9	312.3	5800.6	7.7	4.6	18.8	23.63	21.88	.625	12.00	.875	14.61	14.61	
24X 9X .688/ .875T	82.89	1422.3	316.6	6830.9	8.2	4.7	18.7	24.38	24.88	.688	9.00	.875	18.15	18.15	
21X13X .625/ .875T	83.30	1318.7	330.8	6175.0	7.8	4.7	18.7	24.50	21.88	.625	13.00	.875	14.61	14.61	
24X10X .688/ .875T	85.85	1448.1	337.3	7216.6	8.4	5.0	21.4	25.25	24.88	.688	10.00	.875	18.15	18.15	
21X14X .625/ .875T	86.29	1327.6	349.1	6462.7	8.0	4.9	18.5	25.38	21.88	.625	14.00	.875	14.61	14.61	
24X 8X .688/1.125T	86.70	1461.1	341.5	7371.1	8.5	5.0	21.6	25.50	25.13	.688	8.00	1.125	18.32	18.32	
24X11X .688/ .875T	88.84	1471.6	358.8	7596.9	8.6	5.2	21.2	26.13	24.88	.688	11.00	.875	18.15	18.15	
24X 9X .688/1.125T	90.54	1491.1	368.5	7868.0	8.7	5.3	21.4	26.63	25.13	.688	9.00	1.125	18.32	18.32	
24X12X .688/ .875T	91.88	1493.7	379.0	7974.4	8.8	5.3	21.0	27.00	24.88	.688	12.00	.875	18.15	18.15	
24X13X .688/ .875T	94.79	1513.8	399.9	8344.5	8.9	5.5	20.9	27.88	24.88	.688	13.00	.875	18.15	18.15	
24X11X .688/1.125T	98.19	1561.4	421.5	8814.9	9.1	5.7	20.9	28.88	25.13	.688	11.00	1.125	18.32	18.32	
27X 8X .750/1.125T	99.45	1661.1	412.0	9782.3	9.6	5.9	23.7	29.25	28.13	.750	8.00	1.125	22.22	22.22	
27X11X .750/ .875T	101.59	1672.6	430.5	10058.5	9.7	6.0	23.4	29.88	27.88	.750	11.00	.875	22.04	22.04	
27X 9X .750/1.125T	103.29	1692.4	441.8	10380.8	9.9	6.1	23.5	30.38	28.13	.750	9.00	1.125	22.22	22.22	
27X12X .750/ .875T	104.55	1695.8	453.6	10514.8	9.9	6.2	23.2	30.75	27.88	.750	12.00	.875	22.04	22.04	
27X10X .750/1.125T	107.10	1720.7	471.3	10961.3	10.1	6.4	23.3	31.50	28.13	.750	10.00	1.125	22.22	22.22	
27X11X .750/1.125T	110.94	1746.4	500.9	11533.9	10.3	6.6	23.0	32.63	28.13	.750	11.00	1.125	22.22	22.22	
30X 9X .875/1.375T	122.40	1752.8	523.5	12044.8	10.3	6.9	23.0	36.00	28.38	.875	9.00	1.375	26.15	26.15	
30X10X .875/1.375T	136.00	1990.9	641.1	15944.3	11.7	8.0	24.9	40.00	31.38	.875	10.00	1.375	28.77	28.77	
30X13X .875/1.125T	138.99	2002.4	669.4	16369.6	11.8	8.2	24.5	40.88	31.13	.875	13.00	1.125	28.55	28.55	
30X14X .875/1.375T	140.69	2018.9	690.7	16737.3	11.9	8.3	24.6	41.38	31.38	.875	11.00	1.375	28.77	28.77	
30X15X .875/1.125T	142.80	2024.2	702.0	17007.4	12.0	8.4	24.2	42.00	31.13	.875	14.00	1.125	28.55	28.55	
30X16X .875/1.375T	154.70	2090.3	799.9	19022.0	12.5	9.1	23.8	45.50	31.38	.875	14.00	1.375	28.77	28.77	
33X10X1.000/1.500T	163.20	2236.4	799.3	21198.3	13.0	9.5	26.5	48.00	34.50	1.000	10.00	1.500	36.00	36.00	
33X11X1.000/1.375T	163.64	2235.6	804.7	21231.6	13.1	9.5	26.4	48.13	34.38	1.000	11.00	1.375	35.88	35.88	
36X13X1.000/1.125T	172.14	2434.1	891.1	25197.2	14.1	10.4	28.3	50.33	37.13	1.000	13.00	1.125	38.63	38.63	
33X13X1.000/1.375T	172.99	2289.1	831.0	23011.8	13.4	10.1	25.8	50.88	34.38	1.000	13.00	1.375	35.88	35.88	
36X11X1.000/1.375T	173.84	2452.2	904.5	25690.9	14.2	10.5	28.4	51.13	37.38	1.000	11.00	1.375	38.88	38.88	
36X10X1.000/1.750T	181.90	2512.6	979.1	27653.0	14.6	11.0	28.2	53.50	37.75	1.000	10.00	1.750	39.25	39.25	
33X16X1.000/1.375T	187.00	2355.7	1020.1	25542.0	13.9	10.8	25.0	55.00	34.38	1.000	16.00	1.375	35.88	35.88	

1.5000 - 1 1/2 in.



1.750 IN. PLATE (AREA=104.13 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
3X 2X	2X 1X	WT/FT	ZPL	ZFL						THICK	WIDTH	FLANGE THICK	
3X 2X	2X 1X	2.55	38.9	8.6	34.9	.6	.9	.75	3.19	.125	2.00	.188	.62
4X 2X	2X 1X	2.99	44.8	8.1	40.6	.6	.9	.88	4.19	.125	2.00	.188	.74
3X 3X	2X 1X	3.20	41.8	9.4	37.8	.6	.9	.94	3.19	.125	3.00	.188	.62
4X 3X	2X 1X	3.60	49.2	9.0	45.0	.7	.9	1.06	4.19	.125	3.00	.188	.74
4X 2X	1X 1X	4.69	53.4	9.6	49.4	.7	.9	1.38	4.31	.188	2.00	.313	1.14
5X 2X	1X 1X	4.90	60.9	9.4	56.9	.7	.9	1.44	5.25	.188	2.00	.250	1.32
5X 3X	2X 1X	5.10	49.0	10.9	45.2	.7	.9	1.50	3.31	.188	3.00	.313	.95
5X 2X	1X 1X	5.30	65.3	10.0	61.4	.8	.9	1.56	6.31	.188	2.00	.313	1.33
6X 2X	1X 1X	5.95	80.5	10.9	77.1	.9	1.0	1.75	6.31	.188	2.00	.313	1.52
6X 3X	2X 1X	6.39	85.8	11.8	82.9	.9	1.0	1.88	6.25	.188	3.00	.250	1.50
5X 4X	1X 1X	6.60	77.4	12.3	74.4	.8	1.0	1.94	5.25	.188	4.00	.250	1.32
4X 4X	1X 1X	6.80	67.9	12.7	64.8	.8	1.0	2.00	4.31	.188	4.00	.313	1.14
6X 3X	1X 1X	7.00	94.0	13.8	91.9	.9	1.0	2.06	6.31	.188	3.00	.313	1.52
6X 4X	1X 1X	7.24	96.5	13.5	94.8	.9	1.0	2.13	6.25	.188	4.00	.250	1.50
5X 4X	1X 1X	7.45	85.7	13.8	83.7	.9	1.0	2.19	5.31	.188	4.00	.313	1.33
5X 5X	1X 1X	8.09	107.3	15.2	107.2	1.0	1.0	2.38	6.31	.188	5.00	.313	1.52
7X 3X	2X 1X	9.15	123.6	15.6	125.7	1.1	1.0	2.69	7.31	.250	3.00	.313	2.27
7X 4X	2X 1X	9.55	115.5	16.4	117.4	1.0	1.0	2.81	6.44	.250	3.00	.438	2.05
7X 3X	2X 1X	9.79	133.6	17.0	137.8	1.1	1.0	2.88	7.38	.250	3.00	.313	2.27
8X 3X	2X 1X	10.00	151.5	17.6	158.4	1.2	1.0	2.94	8.31	.250	3.00	.313	2.52
7X 4X	2X 1X	10.20	139.2	18.1	144.8	1.2	1.0	3.00	7.31	.250	4.00	.313	2.27
7X 3X	2X 1X	10.40	143.4	18.4	149.8	1.2	1.0	3.06	7.44	.250	3.00	.438	2.30
8X 3X	2X 1X	10.64	163.7	19.2	173.8	1.3	1.1	3.13	8.38	.250	3.00	.375	2.53
9X 3X	2X 1X	10.85	183.1	19.7	196.9	1.4	1.1	3.19	9.31	.250	3.00	.313	2.77
8X 4X	2X 1X	11.05	170.6	20.3	182.7	1.3	1.1	3.25	8.31	.250	4.00	.313	2.52
7X 5X	2X 1X	11.25	154.3	20.5	163.9	1.2	1.1	3.31	7.31	.250	5.00	.313	2.27
8X 3X	2X 1X	11.25	175.4	20.7	188.8	1.3	1.1	3.31	8.44	.250	3.00	.438	2.55
9X 3X	2X 1X	11.49	197.4	21.5	215.7	1.4	1.1	3.38	9.38	.250	3.00	.375	2.78
9X 4X	2X 1X	11.90	205.4	22.8	226.8	1.5	1.1	3.50	9.31	.250	4.00	.313	2.77
9X 3X	2X 1X	12.10	211.3	23.3	234.5	1.5	1.1	3.56	9.44	.250	3.00	.438	2.80
8X 5X	2X 1X	12.10	188.5	23.1	206.7	1.4	1.1	3.56	8.31	.250	5.00	.313	2.52
9X 4X	2X 1X	12.75	223.6	25.2	252.1	1.5	1.1	3.75	9.38	.250	4.00	.375	2.78
9X 5X	2X 1X	12.95	226.9	25.9	256.8	1.5	1.1	3.81	9.31	.250	5.00	.313	2.77
8X 5X	2X 1X	13.19	207.1	25.8	232.6	1.5	1.1	3.88	6.38	.250	5.00	.375	2.53
7X 5X	2X 1X	13.40	184.6	25.4	204.9	1.4	1.1	3.94	7.44	.250	5.00	.438	2.30
9X 4X	2X 1X	13.60	240.5	27.6	276.6	1.6	1.2	4.00	9.44	.250	4.00	.438	2.80
9X 5X	2X 1X	14.04	248.0	28.9	288.0	1.6	1.2	4.13	9.38	.250	5.00	.375	2.78
8X 5X	2X 1X	14.25	224.2	28.5	257.5	1.5	1.1	4.19	8.44	.250	5.00	.438	2.55
8X 6X	2X 1X	14.45	226.7	29.1	261.4	1.6	1.2	4.25	8.38	.250	6.00	.375	2.53
7X 6X	2X 1X	14.89	202.9	28.8	231.6	1.5	1.1	4.30	7.44	.250	6.00	.438	2.30
9X 5X	2X 1X	15.10	268.3	31.9	319.3	1.7	1.2	4.44	9.44	.250	5.00	.438	2.80
9X 6X	2X 1X	15.30	270.6	32.5	323.2	1.7	1.2	4.50	9.38	.250	6.00	.375	2.78
10X 4X	2X 1X	15.74	278.2	30.4	332.9	1.7	1.2	4.63	10.38	.313	4.00	.375	3.80
8X 6X	2X 1X	15.74	246.1	32.4	291.4	1.6	1.2	4.63	8.44	.250	6.00	.438	2.55

1.7500 - 1 3/4 in.

1.750 IN. PLATE (AREA=104.13 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS				FLANGE		SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
7X 7X .250/ .438T	16.35	220.3	32.2	258.3	1.5	1.2	8.0	7.44	.250	7.00	.438	2.30
10X 4X .313/ .438T	16.53	297.0	33.1	362.8	1.8	1.2	11.0	10.44	.313	4.00	.438	3.82
9X 6X .250/ .438T	16.59	293.5	36.2	350.8	1.8	1.2	10.0	9.44	.250	6.00	.438	2.80
10X 5X .313/ .375T	17.00	305.1	34.5	376.3	1.9	1.2	10.9	10.38	.313	5.00	.375	3.80
8X 7X .250/ .438T	17.20	266.4	36.2	324.8	1.7	1.2	9.0	8.44	.250	7.00	.438	2.55
10X 4X .313/ .500T	17.44	315.4	35.7	393.3	1.9	1.2	11.0	10.50	.313	4.00	.500	3.83
9X 7X .250/ .438T	18.05	316.9	40.5	401.7	1.9	1.3	9.9	9.44	.250	7.00	.438	2.80
10X 6X .313/ .375T	18.29	329.8	38.6	419.0	2.0	1.3	10.9	10.38	.313	6.00	.375	3.80
10X 5X .313/ .500T	19.14	347.7	41.1	450.6	2.0	1.3	11.0	10.50	.313	5.00	.500	3.83
10X 6X .313/ .438T	19.55	354.1	42.5	462.8	2.1	1.3	10.9	10.44	.313	6.00	.438	3.82
10X 5X .313/ .563T	20.20	367.8	44.4	488.1	2.1	1.3	11.0	10.56	.313	5.00	.563	3.85
10X 6X .313/ .500T	20.84	377.6	46.6	507.7	2.1	1.3	10.9	10.50	.313	6.00	.500	3.83
10X 7X .313/ .438T	21.05	379.8	47.3	512.4	2.2	1.3	10.8	10.44	.313	7.00	.438	3.82
9X 7X .313/ .500T	21.45	346.8	46.6	462.0	2.0	1.3	9.9	9.50	.313	7.00	.500	3.52
12X 4X .375/ .469T	21.63	426.6	45.8	587.6	2.3	1.4	12.8	12.47	.375	4.00	.469	5.33
10X 6X .313/ .563T	22.10	399.7	50.5	552.0	2.2	1.4	10.9	10.56	.313	6.00	.563	3.85
10X 7X .313/ .500T	22.54	405.0	51.9	564.0	2.3	1.4	10.9	10.50	.313	7.00	.500	3.83
12X 4X .375/ .531T	22.54	447.3	48.9	629.3	2.4	1.4	12.9	12.53	.375	4.00	.531	5.36
9X 7X .313/ .563T	22.95	368.6	50.9	505.8	2.1	1.4	9.9	9.56	.313	7.00	.563	3.54
9X 8X .313/ .500T	23.15	369.9	51.6	509.0	2.1	1.4	9.9	9.50	.313	8.00	.500	3.52
12X 5X .375/ .469T	23.26	462.8	51.8	662.1	2.4	1.4	12.8	12.47	.375	5.00	.469	5.33
12X 4X .375/ .594T	23.39	467.5	52.0	671.4	2.5	1.4	12.9	12.59	.375	4.00	.594	5.38
10X 7X .313/ .563T	24.00	428.7	56.6	615.0	2.4	1.4	10.9	10.56	.313	7.00	.563	3.85
10X 8X .313/ .500T	24.24	430.9	57.4	620.8	2.4	1.4	10.8	10.50	.313	8.00	.500	3.83
12X 4X .375/ .656T	24.24	486.4	55.0	712.5	2.5	1.5	12.9	12.66	.375	4.00	.656	5.40
9X 8X .313/ .563T	24.85	392.5	56.4	557.5	2.2	1.4	9.9	9.56	.313	8.00	.563	3.54
12X 6X .375/ .469T	24.85	495.8	57.7	735.5	2.6	1.5	12.7	12.47	.375	6.00	.469	5.33
12X 5X .375/ .594T	25.40	508.6	59.5	764.2	2.6	1.5	12.8	12.59	.375	5.00	.594	5.38
10X 8X .313/ .563T	25.94	456.2	62.8	679.4	2.5	1.5	10.8	10.56	.313	8.00	.563	3.85
12X 5X .375/ .656T	26.45	530.5	63.4	816.2	2.7	1.5	12.9	12.66	.375	5.00	.656	5.40
12X 7X .375/ .469T	26.45	526.4	63.7	808.4	2.7	1.5	12.7	12.47	.375	7.00	.469	5.33
12X 6X .375/ .594T	27.40	546.2	67.1	856.8	2.8	1.6	12.8	12.59	.375	6.00	.594	5.38
12X 7X .375/ .531T	27.95	554.7	69.3	879.6	2.8	1.6	12.7	12.53	.375	7.00	.531	5.36
12X 6X .375/ .656T	28.70	569.8	71.8	918.4	2.9	1.6	12.8	12.66	.375	6.00	.656	5.40
12X 7X .375/ .594T	29.44	580.6	74.7	949.2	2.9	1.6	12.7	12.59	.375	7.00	.594	5.38
12X 8X .375/ .531T	29.75	584.1	76.0	960.0	2.9	1.6	12.6	12.53	.375	8.00	.531	5.36
14X 5X .438/ .531T	29.85	630.3	71.6	1046.4	3.0	1.7	14.6	14.53	.438	5.00	.531	7.13
14X 5X .438/ .594T	30.91	655.0	76.0	1112.4	3.1	1.7	14.6	14.59	.438	5.00	.594	7.16
12X 8X .375/ .594T	31.45	611.9	82.3	1039.8	3.0	1.7	12.6	12.59	.375	8.00	.594	5.38
12X 9X .375/ .531T	31.55	612.1	82.8	1041.7	3.0	1.7	12.6	12.53	.375	9.00	.531	5.36
14X 6X .438/ .531T	31.65	669.6	79.4	1155.5	3.2	1.7	14.6	14.53	.438	6.00	.531	7.13
14X 5X .438/ .656T	31.99	678.9	80.5	1181.2	3.2	1.7	14.7	14.66	.438	5.00	.656	7.19
16X 5X .438/ .531T	32.84	771.8	85.4	1405.6	3.5	1.8	16.5	16.53	.438	5.00	.531	8.01
14X 6X .438/ .594T	32.95	695.9	84.7	1234.3	3.3	1.8	14.6	14.59	.438	6.00	.594	7.16
14X 5X .438/ .719T	33.05	701.0	84.9	1247.4	3.3	1.8	14.7	14.72	.438	5.00	.719	7.21

1.7500 - 1 3/4 in.



1.750 IN. PLATE (AREA=104.13 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	THICK						WEB	WIDTH	FLANGE	
12X 8X .375/ .656T	33.15	638.4	98.6	1120.8	3.1	1.8	12.7	9.75	12.66	.375	8.00	.656	5.40
14X 7X .438/ .531T	33.46	705.1	87.2	1263.8	3.3	1.8	14.5	9.84	14.53	.438	7.00	.531	7.13
16X 5X .438/ .594T	33.90	798.6	90.5	1490.6	3.6	1.9	16.5	9.97	16.59	.438	5.00	.594	8.03
14X 6X .438/ .656T	34.20	721.7	30.1	1314.6	3.4	1.8	14.6	10.06	14.66	.438	6.00	.656	7.19
16X 6X .438/ .531T	34.65	814.8	94.3	1545.7	3.7	1.9	16.4	10.19	16.53	.438	6.00	.531	8.01
16X 5X .438/ .656T	34.95	824.4	95.5	1575.9	3.7	1.9	16.5	10.28	16.66	.438	5.00	.656	8.06
14X 7X .438/ .594T	34.35	733.3	93.5	1354.9	3.4	1.8	14.5	10.28	14.59	.438	7.00	.594	7.16
14X 8X .438/ .531T	35.29	737.7	95.1	1371.4	3.5	1.9	14.4	10.38	14.53	.438	8.00	.531	7.13
16X 6X .438/ .594T	35.30	843.8	100.4	1645.4	3.8	2.0	16.4	10.56	16.59	.438	6.00	.594	8.03
16X 5X .438/ .719T	36.01	849.1	100.6	1661.2	3.8	2.0	16.5	10.59	16.72	.438	5.00	.719	8.09
16X 7X .438/ .531T	36.45	853.6	103.2	1682.7	3.8	2.0	16.3	10.72	16.53	.438	7.00	.531	8.01
14X 8X .438/ .594T	36.39	767.6	102.3	1475.2	3.6	1.9	14.4	10.88	14.59	.438	8.00	.594	7.16
14X 9X .438/ .531T	37.09	767.8	102.9	1477.5	3.6	1.9	14.4	10.91	14.53	.438	9.00	.531	7.13
16X 7X .438/ .594T	37.94	864.6	110.3	1798.6	3.9	2.0	16.3	11.16	16.59	.438	7.00	.594	8.03
16X 8X .438/ .531T	38.25	888.9	111.9	1817.5	4.0	2.0	16.2	11.25	16.53	.438	8.00	.531	8.01
16X 6X .438/ .719T	39.45	898.2	112.6	1847.6	4.0	2.1	16.4	11.31	16.72	.438	6.00	.719	8.09
16X 7X .438/ .656T	39.41	914.0	117.3	1314.4	4.1	2.1	16.3	11.59	16.66	.438	7.00	.656	8.06
16X 8X .438/ .594T	39.95	921.6	120.1	1948.9	4.1	2.1	16.2	11.75	16.59	.438	8.00	.594	8.03
16X 9X .438/ .531T	40.05	921.7	120.8	1951.7	4.1	2.1	16.2	11.78	16.53	.438	9.00	.531	8.01
16X 7X .438/ .719T	40.30	942.3	124.6	2032.2	4.2	2.2	16.3	12.03	16.72	.438	7.00	.719	8.09
16X 8X .438/ .656T	41.65	952.7	128.3	2081.7	4.2	2.2	16.2	12.25	16.66	.438	8.00	.656	8.06
14X 5X .500/ .656T	41.75	990.4	118.4	2158.4	4.3	2.2	18.2	12.28	18.66	.500	5.00	.656	10.21
16X 9X .438/ .594T	41.96	955.9	130.0	2038.9	4.2	2.2	16.1	12.34	16.59	.438	9.00	.594	8.03
16X 5X .500/ .875T	42.09	915.3	118.5	1953.9	4.1	2.1	16.5	12.38	16.88	.500	5.00	.875	9.32
18X 6X .500/ .594T	42.70	1010.6	124.0	2245.7	4.4	2.2	18.1	12.56	18.59	.500	6.00	.594	10.17
18X 5X .500/ .719T	42.91	1015.3	124.0	2262.3	4.4	2.2	18.2	12.59	18.72	.500	5.00	.719	10.24
14X 10X .438/ .656T	43.15	857.1	128.7	1936.1	4.0	2.1	14.3	12.69	14.66	.438	10.00	.656	7.19
16X 8X .438/ .719T	43.35	981.6	136.5	2213.0	4.4	2.3	16.2	12.75	16.72	.438	8.00	.719	8.09
16X 9X .438/ .656T	43.89	987.8	139.2	2246.5	4.4	2.3	16.1	12.91	16.66	.438	9.00	.656	8.06
14X 6X .500/ .656T	44.00	1038.8	130.7	2368.9	4.5	2.3	18.1	12.94	18.66	.500	6.00	.656	10.21
16X 10X .438/ .594T	44.80	987.8	140.0	2249.3	4.4	2.3	16.1	12.94	16.59	.438	10.00	.594	8.03
14X 11X .438/ .656T	45.36	803.7	138.2	1961.1	4.1	2.2	14.2	13.34	14.66	.438	11.00	.656	7.19
16X 9X .438/ .719T	45.80	1018.0	148.6	2394.4	4.5	2.4	16.1	13.47	16.72	.438	9.00	.719	8.09
16X 10X .438/ .656T	46.10	1020.0	150.1	2409.1	4.5	2.4	16.0	13.56	16.66	.438	10.00	.656	8.06
18X 7X .500/ .719T	47.70	1111.0	150.8	2718.2	4.8	2.4	18.0	14.03	18.72	.500	7.00	.719	10.24
18X 6X .500/ .875T	48.45	1128.2	154.3	2800.9	4.9	2.5	18.1	14.25	18.88	.500	6.00	.875	10.32
18X 8X .500/ .719T	50.15	1151.7	164.1	2940.5	5.0	2.6	17.9	14.75	18.72	.500	8.00	.719	10.24
18X 9X .500/ .656T	50.63	1158.5	167.3	2983.5	5.0	2.6	17.8	14.91	18.66	.500	9.00	.656	10.21
18X 10X .500/ .594T	50.80	1158.4	168.2	2986.7	5.0	2.6	17.8	14.94	18.59	.500	10.00	.594	10.17
18X 7X .500/ .875T	51.44	1176.0	170.5	3072.2	5.1	2.6	18.0	15.13	18.88	.500	7.00	.875	10.32
18X 9X .500/ .719T	52.60	1188.4	177.4	3159.0	5.1	2.7	17.8	15.47	18.72	.500	9.00	.719	10.24
19X 10X .500/ .656T	52.30	1191.1	179.3	3179.9	5.2	2.7	17.7	15.56	18.66	.500	10.00	.656	10.21
18X 8X .500/ .875T	54.40	1219.1	186.8	3340.9	5.3	2.7	17.9	16.00	18.88	.500	8.00	.875	10.32
18X 11X .500/ .656T	55.15	1221.9	191.5	3378.8	5.3	2.8	17.6	16.22	18.66	.500	11.00	.656	10.21
18X 11X .500/ .719T	57.49	1254.0	204.2	3594.7	5.4	2.9	17.6	16.91	18.72	.500	11.00	.719	10.24

1.7500 - 1 3/4 in.

1.750 IN. PLATE (AREA=104.13 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	VF	AREA	***** BEAM DIMENSIONS *****			***** FLANGE *****			SHEAR AREA
	WT/FT	ZPL	ZFL					DEPTH	THICK	WEB	WIDTH	THICK	THICK	
18X12X .500/.719T	59.94	1282.4	217.5	3005.1	5.6	3.0	17.5	17.63	18.72	.500	12.00	.719	.719	18.24
18X10X .500/.875T	60.35	1292.4	219.1	3064.7	5.6	3.0	17.6	17.75	18.88	.500	10.00	.875	.875	18.32
21X 8X .625/.875T	58.44	1482.0	243.4	4940.0	6.3	3.3	28.3	20.13	21.88	.625	8.00	.875	.875	14.77
21X10X .625/.750T	70.14	1501.1	254.7	5117.5	6.4	3.4	28.1	20.63	21.75	.625	10.00	.750	.750	14.69
21X 9X .625/.875T	71.40	1521.6	262.1	5203.1	6.5	3.5	28.2	21.00	21.88	.625	9.00	.875	.875	14.77
21X11X .625/.750T	72.69	1533.7	270.9	5411.2	6.6	3.5	28.0	21.38	21.75	.625	11.00	.750	.750	14.69
21X10X .625/.875T	74.39	1558.0	281.0	5625.6	6.7	3.6	28.0	21.88	22.13	.625	10.00	.875	.875	14.77
21X 9X .625/1.125T	79.05	1616.9	309.0	6194.4	7.0	3.8	28.0	23.25	22.13	.625	9.00	1.125	1.125	14.93
21X12X .625/.875T	80.34	1620.4	318.1	6283.7	7.0	3.9	19.8	23.63	21.88	.625	12.00	.875	.875	14.77
24X 9X .688/.875T	82.89	1784.8	323.0	7202.5	7.5	4.1	22.5	24.38	24.88	.688	9.00	.875	.875	18.32
21X13X .625/.875T	83.30	1648.4	336.8	6608.9	7.2	4.0	19.6	24.50	24.88	.625	13.00	.875	.875	14.77
24X10X .688/.875T	85.85	1822.0	344.0	7705.2	7.7	4.2	22.4	25.25	24.88	.688	10.00	.875	.875	18.32
21X14X .625/.875T	86.29	1673.9	355.5	6928.1	7.3	4.1	19.5	25.38	21.88	.625	14.00	.875	.875	14.77
24X 8X .688/1.125T	86.70	1839.7	348.3	7872.7	7.8	4.3	22.6	25.50	25.13	.688	8.00	1.125	1.125	18.49
24X11X .688/.875T	88.84	1856.2	365.1	8123.7	7.9	4.4	22.3	26.13	24.88	.688	11.00	.875	.875	18.32
24X 9X .688/1.125T	90.54	1883.4	375.7	8419.9	8.0	4.5	22.4	26.63	25.13	.688	9.00	1.125	1.125	18.49
24X12X .688/.875T	91.80	1888.3	386.3	8540.3	8.1	4.5	22.1	27.00	24.88	.688	12.00	.875	.875	18.32
27X 8X .750/.875T	94.79	1917.8	407.5	8950.6	8.2	4.7	22.0	27.88	25.13	.750	13.00	.875	.875	18.32
24X11X .688/1.125T	98.19	1957.2	429.7	9470.3	8.4	4.8	22.0	28.88	25.13	.688	11.00	1.125	1.125	18.49
27X 9X .750/1.125T	99.45	2105.5	429.8	10479.4	8.9	5.0	24.9	29.25	28.13	.750	8.00	1.125	1.125	22.41
27X11X .750/.875T	101.59	2122.9	439.4	10787.5	9.0	5.1	24.5	29.88	27.88	.750	11.00	.875	.875	22.22
27X 9X .750/1.125T	103.29	2150.3	451.1	11140.9	9.1	5.2	24.7	30.38	28.13	.750	9.00	1.125	1.125	22.41
27X12X .750/.875T	104.55	2156.1	463.0	11292.8	9.2	5.2	24.4	30.75	27.88	.750	12.00	.875	.875	22.22
27X10X .750/1.125T	107.10	2190.7	481.8	11785.3	9.3	5.4	24.5	31.50	28.13	.750	10.00	1.125	1.125	22.41
27X11X .750/1.125T	110.94	2227.8	511.2	12423.7	9.5	5.6	24.3	32.63	28.13	.750	11.00	1.125	1.125	22.41
27X 9X .875/1.375T	122.40	2235.8	535.5	13016.5	9.6	5.8	24.3	36.00	28.38	.875	9.00	1.375	1.375	26.36
30X10X .875/1.375T	136.00	2550.8	655.9	17286.1	11.0	6.8	26.4	43.00	31.38	.875	10.00	1.375	1.375	28.99
30X13X .875/1.125T	138.99	2567.3	684.6	17771.6	11.1	6.9	26.0	40.88	31.13	.875	13.00	1.125	1.125	28.77
30X14X .875/1.375T	148.69	2590.2	696.3	18181.4	11.2	7.0	26.1	41.38	31.38	.875	11.00	1.375	1.375	28.99
30X14X .875/1.125T	142.80	2598.7	717.8	18493.4	11.2	7.1	25.8	42.00	31.13	.875	14.00	1.125	1.125	28.77
30X14X .875/1.375T	154.70	2691.5	817.9	20782.6	11.8	7.7	25.4	45.50	31.38	.875	14.00	1.375	1.375	28.99
33X10X1.000/1.500T	163.20	2869.1	820.1	23119.5	12.3	8.1	28.2	48.00	34.50	1.000	10.00	1.500	1.500	36.25
33X11X1.000/1.375T	163.64	2868.4	825.5	23160.8	12.3	8.1	28.1	48.13	34.38	1.000	11.00	1.375	1.375	36.13
36X13X1.000/1.125T	172.14	3124.5	914.6	27507.6	13.3	8.8	30.1	50.63	37.13	1.000	13.00	1.125	1.125	38.88
33X13X1.000/1.375T	172.99	2942.2	913.6	25188.2	12.7	8.6	27.6	50.88	34.38	1.000	13.00	1.375	1.375	36.13
36X11X1.000/1.375T	173.84	3146.5	928.6	28060.4	13.4	9.9	30.2	51.13	37.38	1.000	11.00	1.375	1.375	39.13
36X10X1.000/1.750T	181.90	3229.9	1005.2	30282.2	13.9	9.4	38.1	53.50	37.75	1.000	10.00	1.750	1.750	39.58
33X16X1.000/1.375T	197.00	3034.7	1045.6	26097.1	13.9	9.3	26.9	55.00	34.38	1.000	16.00	1.375	1.375	36.13

1.7500 - 1 3/4 in.



2.000 IN. PLATE (AREA=136.00 SQ. IN.)

NOMINAL SIZE		WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	SHEAR AREA
3X 2X	125/	.180T	53.3	ZFL	INERTIA	.6	1.0	4.2	.75	3.19	.125	2.00	.180	.65
4X 2X	125/	.180T	2.93	58.8	11.7	60.2	.7	1.0	.98	4.19	.125	2.00	.180	.77
3X 3X	125/	.180T	3.20	56.1	13.8	57.4	.6	1.0	.94	3.19	.125	3.00	.180	.65
4X 3X	125/	.180T	3.60	62.9	12.6	64.9	.7	1.0	1.06	4.19	.125	3.00	.180	.77
4X 2X	188/	.313T	4.69	66.9	13.2	69.6	.7	1.0	1.38	4.31	.188	2.00	.313	1.19
5X 2X	188/	.250T	4.30	73.8	12.5	77.2	.7	1.0	1.44	5.25	.198	2.00	.250	1.36
3X 3X	188/	.313T	5.10	62.9	15.3	65.3	.7	1.0	1.50	3.31	.188	3.00	.313	1.00
5X 2X	188/	.313T	5.30	78.0	13.1	82.0	.8	1.1	1.56	5.31	.188	2.00	.313	1.37
6X 2X	188/	.313T	5.95	92.2	13.6	90.2	.8	1.1	1.75	6.31	.188	2.00	.313	1.56
6X 3X	188/	.250T	6.39	97.3	14.5	104.2	.9	1.1	1.88	6.25	.188	3.00	.250	1.55
5X 4X	188/	.250T	6.60	89.5	15.5	95.6	.8	1.1	2.00	4.31	.188	4.00	.250	1.36
4X 4X	188/	.313T	6.80	80.7	16.4	85.8	.8	1.1	2.00	4.31	.188	4.00	.313	1.19
6X 3X	188/	.313T	7.00	105.1	15.7	113.7	.9	1.1	2.06	6.31	.188	3.00	.313	1.56
6X 4X	188/	.250T	7.24	107.6	16.3	116.7	.9	1.1	2.13	6.25	.188	4.00	.250	1.55
5X 4X	188/	.313T	7.45	97.6	16.9	105.3	.9	1.1	2.19	5.31	.188	4.00	.313	1.37
6X 4X	188/	.313T	8.09	118.1	18.0	129.6	1.0	1.1	2.38	6.31	.188	4.00	.313	1.56
5X 5X	188/	.313T	8.50	106.8	18.8	116.8	.9	1.1	2.50	5.31	.188	5.00	.313	1.37
7X 3X	250/	.313T	9.15	133.8	18.1	148.8	1.0	1.1	2.69	7.31	.250	3.00	.313	2.33
6X 3X	250/	.438T	9.55	126.3	19.2	140.4	1.0	1.1	2.81	6.44	.250	3.00	.438	2.11
7X 3X	250/	.375T	9.79	143.6	19.5	161.3	1.1	1.1	2.88	7.38	.250	3.00	.375	2.35
8X 3X	250/	.313T	10.00	160.8	19.9	192.3	1.1	1.1	3.00	8.31	.250	3.00	.313	2.58
7X 4X	250/	.313T	10.20	149.2	20.6	168.6	1.1	1.1	3.00	7.31	.250	4.00	.313	2.33
7X 3X	250/	.438T	10.40	153.3	20.9	173.8	1.1	1.1	3.06	7.44	.250	3.00	.438	2.36
8X 3X	250/	.375T	10.64	173.0	21.5	198.3	1.2	1.1	3.13	8.38	.250	3.00	.375	2.60
9X 3X	250/	.313T	10.85	191.8	21.9	221.9	1.3	1.2	3.19	9.31	.250	3.00	.313	2.83
8X 4X	250/	.313T	11.05	179.9	22.7	207.6	1.2	1.2	3.25	8.31	.250	4.00	.313	2.50
7X 5X	250/	.313T	11.25	164.3	23.1	188.5	1.2	1.1	3.31	7.31	.250	5.00	.313	2.33
8X 3X	250/	.438T	11.25	184.6	23.0	213.9	1.2	1.2	3.31	8.44	.250	3.00	.438	2.61
9X 3X	250/	.375T	11.49	206.1	23.6	241.4	1.3	1.2	3.38	9.38	.250	3.00	.375	2.85
9X 4X	250/	.313T	11.90	214.4	25.0	252.9	1.3	1.2	3.50	9.31	.250	4.00	.313	2.83
9X 3X	250/	.438T	12.10	220.2	25.4	260.9	1.4	1.2	3.56	9.44	.250	3.00	.438	2.86
8X 5X	250/	.313T	12.10	198.0	25.4	232.5	1.3	1.2	3.56	8.31	.250	5.00	.313	2.58
9X 4X	250/	.375T	12.75	233.0	27.4	279.1	1.4	1.2	3.75	9.38	.250	4.00	.375	2.85
9X 5X	250/	.313T	12.95	236.3	28.1	284.0	1.4	1.2	3.81	9.31	.250	5.00	.313	2.83
8X 5X	250/	.375T	13.19	217.1	28.2	259.5	1.4	1.2	3.88	8.38	.250	5.00	.375	2.60
7X 5X	250/	.438T	13.40	195.1	28.0	231.2	1.3	1.2	3.94	7.44	.250	5.00	.438	2.36
9X 4X	250/	.438T	13.60	250.4	29.8	304.5	1.5	1.2	4.00	9.44	.250	4.00	.438	2.86
9X 5X	250/	.375T	14.04	258.3	31.2	316.4	1.5	1.2	4.13	9.38	.250	5.00	.375	2.85
8X 5X	250/	.438T	14.25	234.8	30.9	285.4	1.4	1.2	4.19	8.44	.250	5.00	.438	2.61
7X 6X	250/	.375T	14.45	237.5	31.6	289.5	1.4	1.2	4.25	8.38	.250	6.00	.375	2.60
8X 6X	250/	.438T	14.89	214.2	31.5	259.2	1.4	1.2	4.38	7.44	.250	6.00	.438	2.36
9X 5X	250/	.438T	15.10	279.6	34.2	348.8	1.6	1.2	4.44	9.44	.250	5.00	.438	2.86
9X 6X	250/	.375T	15.30	282.1	34.8	353.0	1.6	1.3	4.50	9.38	.250	6.00	.375	2.85
10X 4X	313/	.375T	15.74	289.5	32.6	362.7	1.6	1.3	4.63	10.38	.313	4.00	.375	3.87
8X 6X	250/	.438T	15.74	258.0	34.9	320.8	1.5	1.2	4.63	8.44	.250	6.00	.438	2.61

2.0000 - 2 in.

2.000 IN. PLATE (AREA=136.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA
7X 7X	.250/.438T	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK		
10X 4X	.313/.438T	16.35	232.6	35.0	287.2	1.4	1.2	8.2	4.81	7.41	.250	7.00	.438	2.36	
9X 6X	.250/.438T	16.59	309.4	35.3	393.7	1.7	1.3	11.2	4.88	10.44	.313	4.00	.438	3.09	
10X 5X	.313/.375T	16.59	306.7	38.6	392.1	1.7	1.3	10.2	4.88	9.44	.250	6.00	.438	2.86	
8X 7X	.250/.438T	17.00	318.1	36.7	407.7	1.7	1.3	11.1	5.00	10.38	.313	5.00	.375	3.87	
10X 4X	.313/.500T	17.20	279.8	38.8	355.6	1.6	1.3	9.2	5.06	8.44	.250	7.00	.438	2.61	
9X 7X	.250/.438T	17.44	329.1	38.0	425.4	1.7	1.3	11.2	5.13	10.50	.313	4.00	.500	3.91	
10X 6X	.313/.375T	18.05	332.1	42.9	434.7	1.8	1.3	10.1	5.31	9.44	.250	7.00	.438	2.86	
10X 5X	.313/.500T	18.23	344.9	40.8	452.1	1.8	1.3	11.1	5.38	10.38	.313	6.00	.375	3.87	
10X 6X	.313/.438T	19.14	364.2	43.4	484.9	1.9	1.3	11.2	5.63	10.50	.313	5.00	.500	3.91	
10X 6X	.313/.438T	19.55	371.4	44.8	497.6	1.9	1.3	11.1	5.75	10.44	.313	6.00	.438	3.09	
10X 5X	.313/.563T	20.20	386.5	46.8	523.9	1.9	1.4	11.2	5.94	10.56	.313	5.00	.563	3.93	
10X 6X	.313/.500T	20.84	397.5	48.9	544.4	2.0	1.4	11.1	6.13	10.50	.313	6.00	.500	3.91	
10X 7X	.313/.438T	21.05	400.0	49.6	545.4	2.0	1.4	11.1	6.19	10.44	.313	7.00	.438	3.09	
9X 7X	.313/.500T	21.45	366.1	49.1	498.1	1.9	1.4	10.1	6.31	9.50	.313	7.00	.500	3.60	
12X 4X	.375/.469T	21.69	448.5	47.9	626.0	2.1	1.4	13.1	6.38	12.47	.375	4.00	.469	5.43	
10X 6X	.313/.563T	22.10	422.3	52.9	590.6	2.0	1.4	11.2	6.50	10.56	.313	6.00	.563	3.93	
10X 7X	.313/.500T	22.54	428.5	54.4	603.2	2.1	1.4	11.1	6.63	10.50	.313	7.00	.500	3.91	
12X 4X	.375/.531T	22.54	471.7	51.0	669.2	2.2	1.4	13.1	6.63	12.53	.375	4.00	.531	5.45	
9X 7X	.313/.563T	22.95	390.7	53.5	543.9	2.0	1.4	10.2	6.75	9.56	.313	7.00	.563	3.62	
12X 5X	.375/.469T	23.15	392.3	54.2	547.3	2.0	1.4	10.1	6.81	9.50	.313	8.00	.500	3.60	
12X 4X	.375/.594T	23.26	489.2	54.0	703.3	2.2	1.4	13.0	6.84	12.47	.375	5.00	.469	5.43	
10X 7X	.313/.563T	23.39	494.4	54.2	712.9	2.2	1.4	13.1	6.88	12.59	.375	4.00	.594	5.47	
10X 7X	.313/.500T	24.00	455.5	59.0	656.4	2.1	1.4	11.1	7.06	10.56	.313	7.00	.563	3.93	
10X 8X	.313/.500T	24.24	458.2	59.9	662.5	2.2	1.4	11.1	7.13	10.50	.313	8.00	.580	3.91	
12X 4X	.375/.656T	24.24	515.8	57.3	755.6	2.3	1.5	13.2	7.13	12.66	.375	4.00	.656	5.50	
9X 6X	.250/.563T	24.85	418.2	59.1	598.2	2.0	1.4	10.1	7.31	9.56	.313	8.00	.563	3.62	
12X 6X	.375/.469T	24.85	526.9	60.0	779.6	2.3	1.5	13.0	7.31	12.47	.375	6.00	.469	5.43	
12X 5X	.375/.594T	25.40	541.5	61.8	809.4	2.4	1.5	13.1	7.47	12.59	.375	5.00	.594	5.47	
12X 6X	.375/.563T	25.94	487.6	65.4	723.3	2.2	1.5	11.1	7.63	10.56	.313	8.00	.563	3.93	
12X 7X	.375/.469T	26.45	566.9	65.7	863.6	2.5	1.5	13.1	7.78	12.66	.375	5.00	.656	5.50	
12X 7X	.375/.594T	26.45	562.5	66.1	859.6	2.4	1.5	12.9	7.78	12.47	.375	7.00	.469	5.43	
12X 6X	.375/.694T	27.40	585.6	69.5	906.0	2.5	1.5	13.0	8.06	12.59	.375	6.00	.594	5.47	
12X 7X	.375/.531T	27.95	595.8	71.7	928.9	2.5	1.6	13.0	8.22	12.53	.375	7.00	.531	5.45	
12X 6X	.375/.656T	28.70	613.6	74.2	970.3	2.6	1.6	13.1	8.44	12.66	.375	6.00	.656	5.50	
12X 7X	.375/.594T	29.44	626.7	77.2	1002.6	2.6	1.6	13.0	8.66	12.59	.375	7.00	.594	5.47	
12X 8X	.375/.531T	29.75	631.0	78.5	1013.9	2.6	1.6	12.9	8.75	12.53	.375	8.00	.531	5.45	
14X 5X	.438/.531T	29.85	680.4	73.9	1101.3	2.8	1.6	14.9	8.78	14.53	.438	5.00	.531	7.24	
14X 5X	.438/.594T	30.91	708.9	78.3	1170.0	2.8	1.7	14.9	9.03	14.59	.438	5.00	.594	7.27	
12X 8X	.375/.594T	31.45	664.6	84.8	1097.5	2.7	1.7	12.9	9.25	12.59	.375	8.00	.594	5.47	
12X 9X	.375/.531T	31.55	665.0	85.4	1099.6	2.8	1.7	12.9	9.28	12.53	.375	9.00	.531	5.45	
14X 6X	.438/.531T	31.65	726.6	81.8	1215.0	2.9	1.7	14.9	9.31	14.53	.438	6.00	.531	7.24	
14X 5X	.438/.656T	31.99	737.6	82.9	1241.7	2.9	1.7	15.0	9.41	14.66	.438	5.00	.656	7.30	
16X 5X	.438/.531T	32.84	842.3	87.7	1471.9	3.2	1.7	16.8	9.66	16.53	.438	5.00	.531	8.12	
14X 6X	.438/.594T	32.95	758.4	97.2	1297.2	3.0	1.7	14.9	9.63	14.59	.438	6.00	.594	7.27	
14X 5X	.438/.719T	33.05	764.2	97.4	1310.7	3.0	1.7	15.0	9.72	14.72	.438	5.00	.719	7.32	



2.000 IN. PLATE (AREA=136.00 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS				R	Yp	Yf	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	INERTIA	INERTIA						THICK	WIDTH	THICK
12X 8X .375/ .656T	33.15	697.0	91.2	1182.4	1182.4	2.8	1.7	13.0	9.75	12.66	.375	8.00	.656
14X 7X .438/ .531T	33.46	769.7	99.7	1326.0	1326.0	3.0	1.7	14.8	9.84	14.53	.438	7.00	.531
16X 5X .438/ .594T	33.90	874.9	92.8	1560.3	1560.3	3.3	1.8	16.8	9.97	16.59	.438	5.00	.594
14X 6X .438/ .656T	34.20	789.8	32.6	1381.0	1381.0	3.1	1.7	14.9	10.06	14.66	.438	6.00	.656
16X 6X .438/ .531T	34.65	894.9	96.7	1617.8	1617.8	3.3	1.8	16.7	10.19	16.53	.438	6.00	.531
16X 5X .438/ .656T	34.35	906.4	97.9	1649.1	1649.1	3.4	1.8	16.8	10.28	16.66	.438	5.00	.656
14X 7X .438/ .594T	34.95	804.3	96.0	1423.3	1423.3	3.1	1.8	14.8	10.28	14.59	.438	7.00	.594
14X 8X .438/ .531T	35.29	810.0	97.7	1440.6	1440.6	3.1	1.8	14.8	10.38	14.53	.438	8.00	.531
16X 6X .438/ .594T	35.90	930.6	102.9	1721.8	1721.8	3.4	1.9	16.7	10.56	16.59	.438	6.00	.594
16X 5X .438/ .719T	36.01	936.8	103.1	1738.1	1738.1	3.4	1.9	16.9	10.59	16.72	.438	5.00	.719
16X 7X .438/ .531T	36.45	943.0	105.7	1760.8	1760.8	3.5	1.9	16.7	10.72	16.53	.438	7.00	.531
14X 8X .438/ .594T	36.93	847.2	105.0	1549.4	1549.4	3.2	1.8	14.8	10.88	14.59	.438	8.00	.594
14X 9X .438/ .531T	37.09	847.6	105.6	1551.9	1551.9	3.3	1.8	14.7	10.91	14.53	.438	9.00	.531
16X 7X .438/ .594T	37.34	981.7	112.9	1881.9	1881.9	3.6	1.9	16.7	11.16	16.59	.438	7.00	.594
16X 8X .438/ .531T	38.25	987.4	114.5	1901.7	1901.7	3.6	1.9	16.6	11.25	16.53	.438	8.00	.531
16X 6X .438/ .719T	38.45	998.5	115.2	1932.9	1932.9	3.6	1.9	16.8	11.31	16.72	.438	6.00	.719
16X 7X .438/ .656T	39.41	1018.9	120.0	2003.0	2003.0	3.7	2.0	16.7	11.59	16.66	.438	7.00	.656
16X 8X .438/ .594T	39.95	1028.2	122.8	2039.3	2039.3	3.7	2.0	16.6	11.75	16.59	.438	8.00	.594
16X 9X .438/ .531T	40.05	1029.2	123.4	2042.3	2042.3	3.7	2.0	16.5	11.78	16.53	.438	9.00	.531
16X 7X .438/ .719T	40.90	1054.8	127.3	2126.4	2126.4	3.8	2.0	16.7	12.03	16.72	.438	7.00	.719
16X 8X .438/ .656T	41.65	1068.6	131.1	2178.6	2178.6	3.8	2.0	16.6	12.25	16.66	.438	8.00	.656
18X 5X .500/ .656T	41.75	1108.3	121.1	2256.8	2256.8	3.9	2.0	18.6	12.28	18.66	.500	5.00	.656
16X 9X .438/ .594T	41.96	1073.0	132.8	2190.7	2190.7	3.8	2.0	16.5	12.34	18.59	.438	9.00	.594
16X 5X .500/ .875T	42.03	1023.3	121.2	2046.2	2046.2	3.7	2.0	16.9	12.38	16.88	.500	5.00	.875
18X 6X .500/ .594T	42.70	1134.1	126.7	2346.1	2346.1	4.0	2.1	18.5	12.56	18.59	.500	6.00	.594
18X 5X .500/ .719T	42.81	1139.7	126.7	2363.2	2363.2	4.0	2.1	18.6	12.59	18.72	.500	5.00	.719
14X 10X .438/ .656T	43.15	961.6	131.6	1929.1	1929.1	3.6	2.0	14.7	12.69	14.66	.438	10.00	.656
16X 8X .438/ .719T	43.35	1106.0	139.3	2316.5	2316.5	3.9	2.1	18.6	12.75	16.72	.438	8.00	.719
16X 9X .438/ .656T	43.89	1114.3	142.1	2351.8	2351.8	4.0	2.1	18.5	12.91	16.66	.438	9.00	.656
18X 6X .500/ .656T	44.00	1169.8	133.5	2474.8	2474.8	4.1	2.1	18.5	12.94	18.66	.500	6.00	.656
16X 10X .438/ .594T	44.00	1114.5	142.9	2352.0	2352.0	4.0	2.1	16.5	12.94	18.59	.438	10.00	.594
14X 11X .438/ .656T	45.36	996.6	141.3	2061.3	2061.3	3.7	2.1	14.6	13.34	14.66	.438	11.00	.656
16X 9X .438/ .719T	45.90	1153.8	151.5	2507.6	2507.6	4.1	2.2	16.5	13.47	16.72	.438	9.00	.719
16X 10X .438/ .656T	46.10	1156.8	153.1	2523.3	2523.3	4.1	2.2	16.5	13.56	16.66	.438	10.00	.656
18X 7X .500/ .719T	47.70	1263.1	153.8	2844.3	2844.3	4.4	2.2	18.5	14.03	18.72	.500	7.00	.719
18X 6X .500/ .875T	48.45	1285.0	157.4	2927.8	2927.8	4.4	2.3	18.6	14.25	18.88	.500	6.00	.875
18X 8X .500/ .719T	50.15	1316.7	167.3	3075.3	3075.3	4.5	2.3	18.4	14.75	18.72	.500	8.00	.719
18X 9X .500/ .656T	50.69	1326.0	170.5	3120.8	3120.8	4.5	2.4	18.3	14.91	18.66	.500	9.00	.656
18X 10X .500/ .594T	50.80	1326.1	171.3	3124.3	3124.3	4.5	2.4	18.2	14.94	18.59	.500	10.00	.594
18X 7X .500/ .875T	51.44	1348.3	173.7	3213.8	3213.8	4.6	2.4	18.5	15.13	18.88	.500	7.00	.875
18X 9X .500/ .719T	52.60	1365.7	180.7	3305.9	3305.9	4.7	2.4	18.3	15.47	18.72	.500	9.00	.719
18X 10X .500/ .656T	52.90	1369.6	182.6	3328.2	3328.2	4.7	2.4	18.2	15.56	18.66	.500	10.00	.656
18X 8X .500/ .875T	54.40	1406.2	130.2	3497.7	3497.7	4.8	2.5	18.4	16.00	18.88	.500	8.00	.875
18X 11X .500/ .656T	55.15	1411.1	194.9	3538.7	3538.7	4.8	2.5	18.2	16.22	18.66	.500	11.00	.656
18X 11X .500/ .719T	57.49	1454.4	207.8	3767.4	3767.4	5.0	2.6	18.1	16.91	18.72	.500	11.00	.719

2.0000 - 2 in.

2.000 IN. PLATE (AREA=136.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	YF	AREA	DEPTH	THICK	DIMENSIONS			SHEAR AREA
18X12X	500/ .719I	WT/FT	ZPL	ZFL							WEB	FLANGE	THICK	
18X12X	500/ .719I	59.34	1493.4	221.2	5.1	2.7	18.0	17.53	18.72	.500	12.00	12.00	.719	10.36
18X10X	500/ .875I	60.35	1506.3	222.9	5.1	2.7	18.2	17.53	18.72	.500	12.00	12.00	.875	10.44
21X 8X	625/ .875I	68.44	1742.2	247.7	5.8	3.0	20.9	20.13	21.88	.625	8.00	8.00	.875	14.93
21X10X	625/ .750I	70.14	1768.8	259.1	5.9	3.0	20.7	20.63	21.75	.625	10.00	10.00	.750	14.84
21X 9X	625/ .875I	71.40	1796.1	266.6	5.9	3.1	20.8	21.00	21.88	.625	9.00	9.00	.875	14.93
21X11X	625/ .750I	72.69	1813.4	275.6	6.0	3.1	20.6	21.38	21.75	.625	11.00	11.00	.750	14.84
21X10X	625/ .875I	74.39	1846.2	295.8	6.1	3.2	20.7	21.88	21.88	.625	10.00	10.00	.875	14.93
21X 9X	625/ .125I	79.05	1928.5	314.1	6.4	3.4	20.7	23.25	22.13	.625	9.00	9.00	1.125	15.08
21X12X	625/ .875I	80.34	1933.1	323.3	6.4	3.4	20.5	23.63	21.88	.625	12.00	12.00	.875	14.93
24X 9X	688/ .875I	82.89	2132.9	328.5	6.9	3.6	23.3	24.38	24.88	.688	9.00	9.00	.875	18.49
21X13X	625/ .975I	93.30	1972.4	342.2	6.6	3.5	20.3	24.50	21.88	.625	13.00	13.00	.875	14.93
24X10X	688/ .875I	85.85	2183.9	349.8	7.1	3.7	23.2	25.25	24.88	.688	10.00	10.00	.875	18.49
21X14X	625/ .875I	86.29	2008.5	361.1	6.7	3.6	20.2	25.39	21.88	.625	14.00	14.00	.875	14.93
24X 8X	688/ .125I	86.70	2207.1	354.2	7.2	3.8	23.4	25.50	25.13	.688	8.00	8.00	1.125	18.67
24X11X	688/ .875I	88.84	2231.1	371.1	7.3	3.8	23.0	26.13	24.88	.688	11.00	11.00	.875	18.49
24X 9X	688/ .125I	90.54	2267.4	392.0	7.4	3.9	23.2	26.63	25.13	.688	9.00	9.00	1.125	18.67
24X12X	688/ .975I	91.80	2275.6	392.6	7.4	4.0	22.9	27.00	24.88	.688	12.00	12.00	.875	18.49
24X13X	688/ .975I	94.79	2316.8	414.1	7.6	4.1	22.8	27.88	24.88	.688	13.00	13.00	.875	18.49
24X11X	688/ .125I	98.13	2370.5	436.6	7.8	4.2	22.9	28.88	25.13	.688	11.00	11.00	1.125	18.67
27X 8X	750/ .125I	93.45	2548.8	428.1	8.2	4.3	25.8	29.25	28.13	.750	8.00	8.00	1.125	22.60
27X11X	750/ .875I	101.59	2573.8	446.9	8.3	4.4	25.5	29.88	27.88	.750	11.00	11.00	.875	22.41
27X 9X	750/ .125I	103.29	2610.2	458.8	8.4	4.5	25.6	30.38	28.13	.750	9.00	9.00	1.125	22.60
27X12X	750/ .875I	104.55	2619.4	470.7	8.5	4.6	25.3	30.75	27.88	.750	12.00	12.00	.875	22.41
27X10X	750/ .125I	107.10	2665.9	489.1	8.6	4.7	25.5	31.50	28.13	.750	10.00	10.00	1.125	22.60
27X11X	750/ .125I	110.94	2717.3	519.7	8.8	4.8	25.3	32.63	28.13	.750	11.00	11.00	1.125	22.60
27X 9X	875/ .1375I	122.40	2730.9	545.3	9.0	5.1	25.3	36.00	28.38	.875	9.00	9.00	1.375	26.58
30X10X	875/ .1375I	136.00	3135.6	667.9	10.2	5.9	27.5	40.00	31.38	.875	10.00	10.00	1.375	29.21
30X13X	875/ .125I	138.94	3160.2	636.8	10.3	6.0	27.1	40.88	31.13	.875	13.00	13.00	1.125	28.99
30X11X	875/ .1375I	140.69	3189.7	708.8	10.4	6.1	27.3	41.38	31.38	.875	11.00	11.00	1.375	29.21
30X14X	875/ .125I	142.80	3202.6	730.5	10.5	6.2	27.0	42.00	31.13	.875	14.00	14.00	1.125	28.99
30X11X	875/ .1375I	154.70	3329.4	832.3	11.1	6.7	26.7	45.50	31.38	.875	14.00	14.00	1.375	29.21
33X10X1.000/1.500I		163.20	3543.2	836.5	11.6	7.0	29.4	48.13	34.50	1.000	10.00	10.00	1.500	36.50
33X11X1.000/1.375I		163.64	3542.7	843.0	11.6	7.0	29.4	48.13	34.50	1.000	11.00	11.00	1.375	36.38
36X13X1.000/1.125I		172.14	3865.7	933.1	12.6	7.6	31.5	50.53	37.13	1.000	13.00	13.00	1.125	39.13
33X13X1.000/1.375I		172.99	3642.3	931.5	12.0	7.4	29.0	50.88	34.38	1.000	13.00	13.00	1.375	36.38
36X11X1.000/1.375I		173.34	3896.8	947.5	12.7	7.7	31.7	51.13	37.38	1.000	11.00	11.00	1.375	39.38
36X10X1.000/1.750I		181.90	4004.2	1025.7	13.1	8.1	31.6	53.50	37.75	1.000	10.00	10.00	1.750	39.75
33X16X1.000/1.375I		187.00	3767.9	1065.6	12.6	8.0	28.4	55.00	34.38	1.000	16.00	16.00	1.375	36.38

2.0000 - 2 in.



APPENDIX C  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HY-130 STEEL

0.1250 - 1/8 in.



.125 IN. PLATE (AREA= .47 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL				DEPTH	THICK	FLANGE	
							AREA	WEB	WIDTH	THICK
10X 4X .313/.563T	18.29	12.6	21.7	85.4	3.8	3.9	10.56	.313	6.00	.563
9X 6X .313/.438T	18.50	10.9	21.7	65.5	3.4	3.2	9.44	.313	6.00	.438
10X 5X .313/.500T	19.14	12.8	23.6	88.0	3.8	3.7	10.50	.313	5.00	.500
7X 7X .313/.500T	19.35	7.8	20.0	42.8	2.6	2.1	5.69	.313	7.00	.500
10X 6X .313/.438T	19.55	12.8	24.6	88.9	3.8	3.6	10.44	.313	6.00	.438
9X 6X .313/.500T	19.75	11.2	23.8	73.1	3.4	3.1	9.50	.313	6.00	.500
10X 5X .313/.563T	20.20	13.0	25.5	92.2	3.8	3.6	10.56	.313	5.00	.563
7X 7X .313/.500T	20.84	7.9	21.8	44.7	2.6	2.1	6.13	.313	7.00	.500
10X 6X .313/.563T	20.84	13.1	27.0	93.7	3.8	3.5	10.50	.313	6.00	.563
9X 7X .313/.500T	21.45	11.4	26.8	76.8	3.4	2.9	9.50	.313	7.00	.500
12X 4X .375/.469T	21.69	17.9	25.6	132.7	4.4	5.2	12.47	.375	4.00	.469
8X 7X .313/.563T	21.90	9.7	25.5	61.0	3.0	2.4	6.38	.313	7.00	.563
10X 6X .313/.563T	22.10	13.4	29.3	98.0	3.8	3.3	10.56	.313	6.00	.563
10X 7X .313/.500T	22.54	13.3	30.3	98.5	3.7	3.2	10.50	.313	7.00	.500
12X 4X .375/.531T	22.54	18.3	27.6	139.2	4.4	5.1	12.53	.375	4.00	.531
12X 5X .375/.469T	23.26	18.5	29.5	143.4	4.4	4.9	12.47	.375	5.00	.469
12X 4X .375/.594T	23.39	18.7	29.5	145.5	4.4	4.9	12.59	.375	5.00	.594
7X 7X .375/.625T	23.80	8.9	23.7	58.2	2.6	2.1	7.63	.375	4.00	.625
10X 7X .313/.563T	24.00	13.6	33.0	102.9	3.7	3.1	10.56	.313	7.00	.563
12X 4X .375/.656T	24.24	19.1	31.2	151.5	4.5	4.7	12.66	.375	4.00	.656
12X 5X .375/.531T	24.34	19.0	31.9	150.6	4.4	4.7	12.53	.375	5.00	.531
9X 8X .313/.563T	24.85	11.7	32.5	93.5	3.3	2.6	7.31	.313	8.00	.563
12X 6X .375/.469T	24.85	19.1	33.4	152.8	4.4	4.6	12.47	.375	6.00	.469
12X 5X .375/.594T	25.40	19.4	34.2	157.3	4.5	4.6	12.59	.375	5.00	.594
10X 8X .313/.563T	25.94	13.8	36.8	107.2	3.6	2.9	7.63	.313	8.00	.563
12X 6X .375/.531T	26.15	19.5	36.2	160.5	4.4	4.4	12.53	.375	6.00	.531
12X 5X .375/.656T	26.45	19.7	36.5	163.8	4.5	4.5	12.66	.375	5.00	.656
12X 7X .375/.469T	26.45	19.5	37.2	161.2	4.4	4.3	12.47	.375	7.00	.469
7X 7X .438/.688T	26.79	9.9	25.7	55.8	2.6	2.2	7.88	.438	7.00	.688
12X 6X .375/.594T	27.40	19.9	39.8	167.5	4.4	4.3	12.59	.375	6.00	.594
12X 7X .375/.531T	27.95	19.9	40.6	169.1	4.4	4.2	12.53	.375	7.00	.531
7X 7X .438/.750T	28.25	10.1	27.3	57.8	2.6	2.1	8.31	.438	7.00	.750
12X 6X .375/.656T	28.70	20.3	41.6	174.3	4.4	4.2	12.66	.375	6.00	.656
12X 7X .375/.594T	29.44	20.3	43.7	176.5	4.4	4.0	12.59	.375	7.00	.594
14X 5X .438/.531T	29.85	26.7	40.7	236.1	5.1	5.8	14.53	.438	5.00	.531
14X 5X .438/.594T	30.91	27.2	43.4	246.3	5.1	5.7	14.59	.438	5.00	.594
12X 7X .375/.656T	30.91	20.7	46.9	183.4	4.4	3.9	12.66	.375	7.00	.656
12X 8X .375/.594T	31.45	20.7	48.4	184.3	4.4	3.8	12.59	.375	8.00	.594
14X 6X .438/.531T	31.65	27.5	45.7	251.5	5.1	5.5	14.53	.438	6.00	.531
14X 5X .438/.656T	31.99	27.8	46.1	256.2	5.1	5.6	14.66	.438	5.00	.656
7X 7X .500/.875T	32.74	11.2	30.5	65.7	2.6	2.2	7.88	.500	7.00	.875
14X 6X .438/.594T	32.95	28.1	49.0	262.5	5.1	5.4	14.59	.438	6.00	.594
14X 5X .438/.719T	33.05	28.3	48.8	265.7	5.1	5.5	14.72	.438	5.00	.719
12X 8X .375/.656T	33.15	21.0	51.9	191.3	4.3	3.7	12.66	.375	8.00	.656
7X 6X .563/1.000T	33.80	12.2	30.1	70.6	2.6	2.3	9.94	.563	6.00	1.000

0.1250 - 1/8 in.

125 IN. PLATE (AREA= .47 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		YF		AREA		DEPTH		THICK		WIDTH		FLANGE		SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WIDTH	FLANGE	THICK	THICK	THICK	THICK	WIDTH	FLANGE	THICK	THICK	THICK	THICK
14X 6X .438/ .656T	34.20	28.6	52.2	273.1	5.1	9.6	5.2	10.06	14.66	.438	.656	6.00	.656	6.48	6.48	6.00	.656	6.48	6.48	6.48	6.48
14X 7X .438/ .594T	34.95	28.7	54.6	276.9	5.1	9.6	5.1	10.28	14.59	.438	.594	6.00	.594	6.45	6.45	6.00	.594	6.45	6.45	6.45	6.45
12X 9X .375/ .656T	35.39	21.3	56.9	198.3	4.3	9.3	3.5	10.41	12.66	.375	.656	9.00	.656	4.79	4.79	9.00	.656	4.79	4.79	4.79	4.79
14X 6X .438/ .719T	35.50	29.1	55.4	283.1	5.1	9.7	5.1	10.44	14.72	.438	.719	6.00	.719	6.50	6.50	6.00	.719	6.50	6.50	6.50	6.50
14X 7X .438/ .656T	36.45	29.3	58.2	287.9	5.1	9.8	4.9	10.72	14.66	.438	.656	7.00	.656	6.48	6.48	7.00	.656	6.48	6.48	6.48	6.48
14X 8X .438/ .594T	36.99	29.3	60.1	289.8	5.1	9.9	4.8	10.88	14.59	.438	.594	8.00	.594	6.45	6.45	8.00	.594	6.45	6.45	6.45	6.45
7X 7X .563/1.000T	37.20	12.4	33.7	73.8	2.5	5.9	2.2	10.94	8.80	.563	1.000	7.00	1.000	4.57	4.57	7.00	1.000	4.57	4.57	4.57	4.57
16X 5X .500/ .594T	37.30	36.9	54.4	367.6	5.7	10.0	6.8	10.97	16.59	.500	.594	5.00	.594	8.36	8.36	5.00	.594	8.36	8.36	8.36	8.36
14X 7X .438/ .719T	37.94	29.8	61.9	298.4	5.1	10.0	4.8	11.16	14.72	.438	.719	7.00	.719	6.50	6.50	7.00	.719	6.50	6.50	6.50	6.50
16X 5X .500/ .656T	38.35	37.7	57.3	381.7	5.7	10.1	6.7	11.28	16.66	.500	.656	5.00	.656	8.39	8.39	5.00	.656	8.39	8.39	8.39	8.39
14X 8X .438/ .656T	38.69	29.8	64.2	301.1	5.0	10.1	4.7	11.38	14.66	.438	.656	8.00	.656	6.48	6.48	8.00	.656	6.48	6.48	6.48	6.48
16X 6X .500/ .594T	39.30	38.1	60.7	391.3	5.7	10.3	6.4	11.56	16.59	.500	.594	6.00	.594	8.36	8.36	6.00	.594	8.36	8.36	8.36	8.36
16X 5X .500/ .719T	39.41	38.4	60.4	395.2	5.7	10.3	6.5	11.59	16.72	.500	.719	5.00	.719	8.42	8.42	5.00	.719	8.42	8.42	8.42	8.42
12X 9X .438/ .719T	39.85	23.9	62.0	221.8	4.3	9.3	3.6	11.72	12.72	.438	.719	9.00	.719	5.63	5.63	9.00	.719	5.63	5.63	5.63	5.63
16X 6X .500/ .656T	40.39	30.3	68.3	311.8	5.0	10.5	6.3	11.94	16.66	.500	.656	6.00	.656	8.39	8.39	6.00	.656	8.39	8.39	8.39	8.39
16X 8X .500/ .656T	40.60	38.8	64.3	406.5	5.7	10.5	6.2	12.16	16.59	.500	.656	7.00	.656	8.36	8.36	7.00	.656	8.36	8.36	8.36	8.36
7X 7X .625/1.125T	41.34	39.1	67.1	412.8	5.7	10.6	5.2	12.16	16.59	.625	1.125	5.00	1.125	5.16	5.16	5.00	1.125	5.16	5.16	5.16	5.16
16X 6X .500/ .719T	41.65	13.7	36.6	82.3	2.5	6.0	2.2	12.25	8.13	.625	.719	6.00	.719	8.42	8.42	6.00	.719	8.42	8.42	8.42	8.42
16X 5X .500/ .875T	41.85	39.5	68.0	421.3	5.7	10.7	6.3	12.38	16.88	.500	.875	5.00	.875	8.50	8.50	5.00	.875	8.50	8.50	8.50	8.50
12X 10X .438/ .719T	42.09	39.9	67.8	427.4	5.8	10.7	6.3	12.38	16.88	.500	.719	10.00	.719	5.63	5.63	10.00	.719	5.63	5.63	5.63	5.63
16X 7X .500/ .656T	42.81	39.8	71.3	428.9	5.7	10.8	6.0	12.59	16.66	.500	.656	7.00	.656	8.39	8.39	7.00	.656	8.39	8.39	8.39	8.39
14X 9X .438/ .719T	42.81	30.8	74.8	323.8	5.0	10.5	4.3	12.59	14.72	.438	.719	9.00	.719	6.50	6.50	9.00	.719	6.50	6.50	6.50	6.50
16X 7X .500/ .719T	44.30	40.5	75.6	444.4	5.7	11.0	5.9	13.03	16.72	.500	.719	7.00	.719	8.42	8.42	7.00	.719	8.42	8.42	8.42	8.42
16X 6X .500/ .875T	45.05	41.1	76.8	455.6	5.8	11.1	5.9	13.25	16.88	.500	.875	6.00	.875	8.50	8.50	6.00	.875	8.50	8.50	8.50	8.50
16X 8X .500/ .656T	45.05	40.7	78.1	449.2	5.7	11.0	5.7	13.25	16.66	.500	.656	8.00	.656	8.39	8.39	8.00	.656	8.39	8.39	8.39	8.39
14X 10X .438/ .719T	45.25	31.2	81.1	334.6	4.9	10.7	4.1	13.31	14.72	.438	.719	10.00	.719	6.50	6.50	10.00	.719	6.50	6.50	6.50	6.50
7X 7X .688/1.250T	46.10	15.0	39.7	91.1	2.5	6.1	2.3	13.56	8.25	.688	1.250	5.00	1.250	5.76	5.76	5.00	1.250	5.76	5.76	5.76	5.76
16X 8X .500/ .719T	46.75	41.4	83.1	465.3	5.7	11.2	5.6	13.75	16.72	.500	.719	8.00	.719	8.42	8.42	8.00	.719	8.42	8.42	8.42	8.42
16X 9X .500/ .656T	47.29	41.4	85.1	467.6	5.7	11.3	5.5	13.91	16.66	.500	.656	9.00	.656	8.39	8.39	9.00	.656	8.39	8.39	8.39	8.39
16X 6X .563/ .656T	47.80	51.2	78.4	582.0	6.3	11.4	7.4	14.06	18.66	.563	.656	6.00	.656	10.58	10.58	6.00	.656	10.58	10.58	10.58	10.58
16X 7X .500/ .875T	48.04	42.1	85.8	480.3	5.7	11.4	5.6	14.13	16.88	.500	.875	7.00	.875	8.50	8.50	7.00	.875	8.50	8.50	8.50	8.50
18X 6X .563/ .719T	49.10	52.1	82.6	602.4	6.4	11.6	7.3	14.44	18.72	.563	.719	6.00	.719	10.61	10.61	6.00	.719	10.61	10.61	10.61	10.61
16X 9X .500/ .719T	49.20	42.1	90.5	484.1	5.7	11.5	5.4	14.47	16.72	.500	.719	9.00	.719	8.42	8.42	9.00	.719	8.42	8.42	8.42	8.42
16X 8X .563/ .875T	51.00	42.9	94.7	502.4	5.7	11.7	5.3	15.00	18.88	.500	.875	8.00	.875	8.50	8.50	8.00	.875	8.50	8.50	8.50	8.50
18X 7X .563/ .719T	51.54	53.5	91.1	635.4	6.4	11.9	7.0	15.16	18.72	.563	.719	7.00	.719	10.61	10.61	7.00	.719	10.61	10.61	10.61	10.61
16X 10X .500/ .719T	51.65	42.8	97.9	501.3	5.7	11.7	5.1	15.19	16.72	.500	.719	10.00	.719	8.42	8.42	10.00	.719	8.42	8.42	8.42	8.42
18X 8X .563/ .656T	52.29	53.8	94.1	642.7	6.4	12.0	6.8	15.38	18.66	.563	.656	8.00	.656	10.58	10.58	8.00	.656	10.58	10.58	10.58	10.58
14X 10X .500/ .875T	53.55	35.4	95.0	387.0	4.9	10.9	4.1	15.75	14.88	.500	.875	10.00	.875	7.50	7.50	10.00	.875	7.50	7.50	7.50	7.50
16X 9X .500/ .875T	53.99	43.6	103.6	522.1	5.7	12.0	5.0	15.88	16.88	.500	.875	9.00	.875	8.50	8.50	9.00	.875	8.50	8.50	8.50	8.50
18X 8X .563/ .719T	53.99	54.7	99.5	665.5	6.4	12.2	6.7	16.03	18.72	.563	.719	6.00	.719	10.61	10.61	6.00	.719	10.61	10.61	10.61	10.61
18X 9X .563/ .656T	54.50	54.8	101.8	669.4	6.4	12.2	6.6	16.03	18.66	.563	.656	9.00	.656	10.58	10.58	9.00	.656	10.58	10.58	10.58	10.58
18X 6X .563/1.000T	54.84	55.8	100.5	686.1	6.4	12.3	6.8	16.13	19.00	.563	1.000	6.00	1.000	10.77	10.77	6.00	1.000	10.77	10.77	10.77	10.77
18X 7X .563/ .875T	55.25	55.7	102.8	685.3	6.4	12.3	6.7	16.25	18.88	.563	.875	7.00	.875	10.70	10.70	7.00	.875	10.70	10.70	10.70	10.70
18X 9X .563/ .719T	56.41	55.8	108.0	633.1	6.4	12.4	6.4	16.59	18.72	.563	.719	9.00	.719	10.61	10.61	9.00	.719	10.61	10.61	10.61	10.61

0.1250 - 1/8 in.



.125 IN. PLATE (AREA = .47 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	VF	***** BEAM DIMENSIONS *****				SHEAR AREA
		ZPL	ZFL					DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	
1X10X .500/.875T	56.95	44.2	112.2	539.6	5.6	12.2	4.8	16.75	16.88	10.00	.875	8.50
1X10X .563/.719T	58.85	56.7	116.4	718.5	6.4	12.7	6.2	17.31	18.72	10.00	.719	10.61
1X 8X .563/1.000T	61.64	58.4	123.3	757.7	6.4	13.0	6.1	18.13	19.00	8.00	1.000	10.77
1X11X .563/.875T	67.15	59.6	142.8	799.0	6.3	13.4	5.6	19.75	18.88	11.00	.875	18.70
1X10X .563/1.000T	68.44	60.3	145.8	815.3	6.3	13.5	5.6	20.13	19.00	10.00	1.000	10.77
1X12X .563/.875T	70.14	60.3	152.4	821.2	6.2	13.6	5.4	20.63	18.88	12.00	.875	10.70
1X 9X .625/1.125T	72.69	65.6	148.8	876.8	6.3	13.4	5.9	21.38	19.13	9.00	1.125	12.83
21X 9X .688/.875T	75.85	87.1	158.1	1236.2	7.4	14.2	7.8	22.31	21.88	9.00	.875	15.14
21X10X .688/.875T	78.85	88.6	170.0	1282.1	7.4	14.5	7.5	23.19	21.88	10.00	.875	15.14
21X 8X .688/1.125T	79.70	89.9	170.9	1310.8	7.4	14.6	7.7	23.44	22.13	8.00	1.125	15.31
21X11X .688/.875T	81.80	90.0	181.8	1324.7	7.3	14.7	7.3	24.06	21.88	11.00	.875	15.14
21X 9X .688/1.125T	83.50	91.6	185.7	1365.2	7.4	14.9	7.4	24.56	22.13	9.00	1.125	15.31
21X12X .688/.875T	84.80	91.2	193.5	1364.4	7.3	15.0	7.0	24.94	21.88	12.00	.875	15.14
21X10X .688/1.125T	87.35	93.1	208.2	1414.8	7.4	15.2	7.1	25.69	22.13	10.00	1.125	15.31
21X13X .688/.875T	87.75	92.4	205.0	1401.3	7.3	15.2	6.8	25.81	21.88	13.00	.875	15.14
21X10X .750/.875T	90.95	119.1	208.6	1895.3	8.3	15.9	9.1	26.75	24.08	18.00	.875	18.75
21X 8X .750/1.125T	91.80	120.6	209.8	1933.5	8.4	16.0	9.2	27.00	25.13	8.00	1.125	18.94
21X11X .750/.875T	93.94	121.0	222.0	1958.7	8.3	16.2	8.8	27.63	24.08	11.00	.875	18.75
21X 9X .750/1.125T	95.64	123.0	226.8	2014.5	8.4	16.4	8.9	28.13	25.13	9.00	1.125	18.94
21X12X .750/.875T	96.90	122.8	235.5	2018.2	8.3	16.4	8.6	28.50	24.08	12.00	.875	18.75
21X10X .750/1.125T	99.45	125.2	243.9	2089.5	8.4	16.7	8.6	29.25	25.13	18.00	1.125	18.94
21X13X .750/.875T	99.89	124.4	249.2	2074.5	8.3	16.7	8.3	29.38	24.08	13.00	.875	18.75
21X14X .688/1.125T	102.65	97.7	258.2	1577.2	7.2	16.1	6.1	30.19	22.13	14.00	1.125	15.31
21X15X .688/1.125T	106.45	98.6	272.4	1618.7	7.1	16.3	5.9	31.31	22.13	15.00	1.125	15.31
21X12X .750/1.125T	107.10	128.9	277.7	2223.4	8.3	17.2	8.0	31.50	25.13	12.00	1.125	18.94
21X13X .750/1.125T	110.94	130.5	291.6	2283.7	8.3	17.5	7.8	32.63	25.13	13.00	1.125	18.94
21X 9X .875/1.500T	126.24	180.1	332.7	3344.8	9.4	18.6	10.1	37.13	28.50	9.00	1.500	25.05
21X10X .875/1.125T	127.09	180.0	338.6	3350.1	9.4	18.6	9.9	37.38	28.38	10.00	1.375	24.94
21X13X .875/1.125T	130.05	180.5	357.5	3389.3	9.4	18.8	9.5	38.25	28.13	13.00	1.125	24.72
21X10X .875/1.500T	131.34	183.3	351.8	3469.9	9.4	18.9	9.7	38.63	28.50	10.00	1.500	25.05
21X11X .875/1.125T	131.75	182.9	361.9	3462.7	9.4	18.9	9.6	38.75	28.38	11.00	1.375	24.94
21X14X .875/1.125T	133.89	182.7	376.8	3476.3	9.3	19.8	9.2	39.38	28.13	14.00	1.125	24.72
21X15X .875/1.125T	137.70	184.7	395.7	3558.4	9.3	19.3	9.0	40.50	28.13	15.00	1.125	24.72
21X13X .875/1.500T	146.64	191.1	432.3	3793.6	9.3	19.8	8.8	43.13	28.50	13.00	1.500	25.05
30X10X1.000/1.375T	148.75	239.8	408.0	4757.9	10.4	19.8	11.7	43.75	31.38	10.00	1.375	31.51
30X10X1.000/1.500T	153.00	244.2	429.8	4924.8	10.4	20.2	11.5	45.00	31.50	1.000	1.500	31.63
30X11X1.000/1.375T	153.44	243.8	434.2	4918.6	10.4	20.2	11.3	45.13	31.38	11.00	1.375	31.51
30X10X1.000/1.750T	161.50	252.4	472.1	5242.9	10.5	20.8	11.1	47.50	31.75	10.00	1.750	31.88

0.1250 - 1/8 in.

0.156 IN. PLATE (AREA= .73 SQ. IN.)

NOMINAL SIZE			SECTION MODULUS			DIMENSIONS			FLANGE			SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X .125/ .188T	2.55	2.3	1.4	2.9	1.3	2.1	.75	3.19	.125	2.00	.188	.42	
4X 2X .125/ .188T	2.99	2.4	1.9	5.1	1.7	2.6	.88	4.19	.125	2.00	.188	.54	
3X 2X .188/ .250T	3.60	2.4	1.8	3.5	1.4	1.5	1.06	3.25	.188	2.00	.250	.64	
3X 2X .188/ .313T	4.05	2.5	2.1	3.9	1.6	1.6	1.19	3.31	.188	2.00	.313	.65	
3X 3X .188/ .250T	4.45	2.5	2.5	4.3	1.7	1.7	1.31	3.25	.188	3.00	.250	.64	
4X 2X .188/ .313T	4.69	3.4	3.0	7.1	2.1	2.4	1.38	4.31	.188	2.00	.313	.84	
5X 2X .188/ .250T	4.90	4.2	3.4	10.1	2.2	2.4	1.44	5.25	.188	2.00	.250	1.02	
5X 2X .188/ .313T	5.30	4.4	3.8	11.2	2.2	2.6	1.56	5.31	.188	2.00	.313	1.03	
6X 2X .188/ .313T	5.95	5.4	4.8	16.5	2.6	3.0	1.75	6.31	.188	2.00	.313	1.22	
6X 3X .188/ .250T	6.39	5.5	5.5	17.7	2.6	3.2	1.88	6.25	.188	3.00	.250	1.22	
4X 4X .188/ .313T	6.80	3.7	5.1	9.5	1.9	2.6	2.00	4.31	.188	4.00	.313	.84	
6X 3X .188/ .313T	7.00	5.7	6.4	19.5	2.6	3.4	2.06	6.31	.188	4.00	.313	1.22	
5X 4X .188/ .313T	7.45	4.7	6.4	14.9	2.3	3.1	2.19	5.31	.188	4.00	.313	1.03	
6X 4X .188/ .313T	8.09	5.9	7.9	21.9	2.7	3.7	2.38	6.31	.188	4.00	.313	1.22	
5X 3X .250/ .438T	8.70	5.2	6.7	16.4	2.2	3.2	2.56	5.44	.250	3.00	.438	1.40	
7X 3X .250/ .313T	9.15	7.4	8.1	28.9	2.9	3.9	2.69	7.31	.250	3.00	.313	1.87	
6X 3X .250/ .438T	9.55	6.5	8.3	24.0	2.6	3.7	2.81	6.44	.250	3.00	.438	1.65	
7X 3X .250/ .375T	9.79	7.7	9.0	31.2	2.9	4.1	2.88	7.38	.250	3.00	.375	1.88	
8X 3X .250/ .313T	10.00	8.8	9.6	38.9	3.3	4.4	2.94	8.31	.250	3.00	.313	2.12	
7X 4X .250/ .313T	10.20	7.7	9.8	32.2	2.9	4.2	3.00	7.31	.250	4.00	.313	1.87	
7X 3X .250/ .438T	10.40	7.0	9.9	33.3	3.0	4.2	3.06	7.44	.250	3.00	.438	1.90	
8X 3X .250/ .375T	10.64	9.1	10.6	41.8	3.3	4.6	3.13	8.38	.250	3.00	.375	2.13	
8X 4X .250/ .313T	11.05	9.2	11.5	43.3	3.3	4.7	3.25	8.31	.250	4.00	.313	2.12	
8X 3X .250/ .438T	11.25	9.3	11.7	46.6	3.3	4.8	3.31	8.44	.250	3.00	.438	2.15	
6X 5X .250/ .375T	11.49	6.7	11.0	27.2	2.6	4.1	2.5	3.38	.250	5.00	.375	1.63	
8X 4X .250/ .375T	11.90	9.4	12.9	46.6	3.3	4.9	3.6	3.50	.250	4.00	.375	2.13	
7X 5X .253/ .375T	12.34	8.2	13.1	37.9	2.9	4.6	3.63	7.38	.250	5.00	.375	1.88	
6X 5X .250/ .438T	12.55	6.8	12.3	29.0	2.6	4.2	3.69	6.44	.250	5.00	.438	1.65	
8X 4X .250/ .438T	12.75	9.7	14.4	46.7	3.3	5.1	3.5	8.44	.250	4.00	.438	2.15	
8X 5X .250/ .375T	13.19	9.7	15.3	50.7	3.3	5.2	3.3	8.38	.250	5.00	.375	2.13	
7X 5X .250/ .438T	13.40	8.3	14.6	48.3	2.9	4.8	3.94	7.44	.250	5.00	.438	1.90	
6X 6X .250/ .438T	14.04	6.9	14.2	30.8	2.5	4.4	2.2	4.13	.250	6.00	.438	1.65	
8X 5X .250/ .438T	14.25	9.9	17.0	53.9	3.3	5.4	3.2	4.19	.250	5.00	.438	2.15	
9X 4X .313/ .375T	14.65	12.0	15.6	64.6	3.6	5.4	4.2	4.31	.313	5.00	.375	2.98	
7X 6X .250/ .438T	14.89	8.5	16.9	42.9	2.9	5.1	2.5	4.38	.250	6.00	.438	1.90	
10X 4X .313/ .438T	15.50	12.3	17.1	68.8	3.6	5.6	4.0	4.56	.313	4.00	.438	3.00	
9X 4X .313/ .438T	15.74	13.9	17.8	82.2	3.9	5.9	4.6	4.63	.313	4.00	.375	3.30	
8X 6X .250/ .438T	15.74	10.1	19.6	57.4	3.3	5.7	2.9	4.63	.250	6.00	.438	2.15	
9X 5X .313/ .375T	15.95	12.4	18.1	70.1	3.6	5.7	3.9	4.69	.313	5.00	.375	2.98	
9X 4X .313/ .438T	16.35	12.6	18.7	72.7	3.6	5.8	4.0	4.76	.313	4.00	.438	3.00	
10X 4X .313/ .438T	16.59	14.3	19.5	87.4	3.9	6.1	4.5	4.88	.313	4.00	.438	3.32	
10X 5X .313/ .438T	17.00	14.4	20.6	82.2	3.9	6.2	4.3	5.00	.313	5.00	.375	3.30	
9X 4X .313/ .563T	17.20	12.9	20.2	76.4	3.6	5.9	3.8	5.06	.313	4.00	.563	3.04	
10X 4X .313/ .501T	17.44	14.6	21.3	92.3	4.0	6.3	4.3	5.13	.313	4.00	.501	3.34	
8X 5X .313/ .438T	18.05	14.7	22.7	94.7	4.0	6.4	4.2	5.31	.313	5.00	.438	3.34	

0.1563 - 5/32 in.



.156 IN. PLATE (AREA= .73 SQ.IN.)

***** BEAM DIMENSIONS *****																
SECTION MODULUS				DIMENSIONS				FLANGE		WEB		SHEAR AREA				
NOMINAL SIZE				WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WIDTH	THICK	AREA
10X 4X .313/.563T	18.29	14.9	22.9	96.9	4.0	6.5	4.2	5.38	10.56	.313	4.00	.563	3.35	3.35	.563	3.35
9X 6X .313/.438T	18.50	13.0	22.9	79.7	3.6	6.1	3.5	5.44	9.44	.313	6.00	.438	3.00	3.00	.438	3.00
10X 5X .313/.500T	19.14	15.1	24.9	100.0	4.0	6.6	4.0	5.63	10.50	.313	5.00	.500	3.34	3.34	.500	3.34
7X 7X .313/.500T	19.35	9.5	21.3	50.4	2.8	5.3	2.4	5.69	7.50	.313	7.00	.500	2.40	2.40	.500	2.40
10X 6X .313/.438T	19.55	15.1	25.9	101.1	3.9	6.7	3.9	5.75	10.44	.313	6.00	.438	3.32	3.32	.438	3.32
9X 6X .313/.500T	19.75	13.3	25.2	83.9	3.6	6.3	3.3	5.81	9.50	.313	6.00	.500	3.02	3.02	.500	3.02
10X 5X .313/.563T	20.20	15.4	26.9	104.9	4.0	6.8	3.9	5.94	10.56	.313	5.00	.563	3.35	3.35	.563	3.35
7X 7X .313/.563T	20.84	9.7	23.2	52.7	2.8	5.4	2.3	6.13	7.56	.313	7.00	.563	2.42	2.42	.563	2.42
10X 6X .313/.500T	20.84	15.4	28.4	106.6	3.9	6.9	3.7	6.13	10.50	.313	6.00	.500	3.34	3.34	.500	3.34
9X 7X .313/.500T	21.45	13.5	28.3	88.3	3.5	6.5	3.1	6.31	9.50	.313	7.00	.500	3.02	3.02	.500	3.02
12X 4X .375/.469T	21.69	20.4	26.9	146.6	4.5	7.2	5.5	6.38	12.47	.375	4.00	.469	4.73	4.73	.469	4.73
8X 7X .313/.563T	21.90	11.7	27.1	71.0	3.1	6.1	2.6	6.44	8.56	.313	7.00	.563	2.73	2.73	.563	2.73
10X 6X .313/.563T	22.10	15.7	30.9	111.7	3.9	7.1	3.6	6.50	10.56	.313	6.00	.563	3.35	3.35	.563	3.35
10X 7X .313/.500T	22.54	15.7	32.0	112.2	3.9	7.1	3.5	6.63	10.50	.313	7.00	.500	3.34	3.34	.500	3.34
12X 4X .375/.531T	22.54	20.9	28.9	153.9	4.6	7.4	5.3	6.63	12.53	.375	4.00	.531	4.76	4.76	.531	4.76
12X 5X .375/.469T	23.26	21.1	30.9	158.6	4.6	7.5	5.1	6.84	12.47	.375	5.00	.469	4.73	4.73	.469	4.73
12X 4X .375/.594T	23.39	21.3	30.9	160.9	4.6	7.5	5.2	6.88	12.59	.375	4.00	.594	4.78	4.78	.594	4.78
7X 7X .375/.625T	23.80	10.6	25.2	58.3	2.7	5.5	2.3	7.00	7.63	.375	7.00	.625	2.92	2.92	.625	2.92
10X 7X .313/.563T	24.00	16.0	34.8	117.4	3.9	7.3	3.4	7.06	10.56	.313	7.00	.563	3.35	3.35	.563	3.35
12X 4X .375/.656T	24.24	21.7	32.8	167.5	4.6	7.7	5.1	7.13	12.66	.375	4.00	.656	4.81	4.81	.656	4.81
12X 5X .375/.531T	24.34	21.6	33.4	166.6	4.6	7.7	5.0	7.16	12.53	.375	5.00	.531	4.76	4.76	.531	4.76
9X 8X .313/.563T	24.85	13.9	34.3	96.4	3.5	6.9	2.8	7.31	9.56	.313	8.00	.563	3.04	3.04	.563	3.04
12X 6X .375/.469T	24.85	21.7	34.9	169.2	4.6	7.8	4.8	7.31	12.47	.375	6.00	.469	4.73	4.73	.469	4.73
12X 5X .375/.594T	25.40	22.1	35.9	174.1	4.6	7.9	4.9	7.47	12.59	.375	5.00	.594	4.78	4.78	.594	4.78
10X 8X .313/.563T	25.94	16.2	38.8	122.5	3.8	7.6	3.2	7.63	10.56	.313	8.00	.563	3.35	3.35	.563	3.35
12X 6X .375/.531T	26.15	22.2	37.9	177.7	4.6	8.0	4.7	7.69	12.53	.375	6.00	.531	4.76	4.76	.531	4.76
12X 5X .375/.656T	26.45	22.5	38.2	181.4	4.6	8.1	4.7	7.78	12.66	.375	5.00	.656	4.81	4.81	.656	4.81
12X 7X .375/.469T	26.45	22.2	38.9	178.6	4.6	8.0	4.6	7.78	12.47	.375	7.00	.469	4.73	4.73	.469	4.73
7X 7X .438/.688T	26.79	11.6	27.2	63.9	2.7	5.5	2.3	7.88	7.69	.438	7.00	.688	3.44	3.44	.688	3.44
12X 6X .375/.594T	27.40	22.6	40.8	185.6	4.6	8.2	4.5	8.06	12.59	.375	6.00	.594	4.78	4.78	.594	4.78
12X 7X .375/.531T	27.95	22.7	42.4	187.5	4.6	8.3	4.4	8.22	12.53	.375	7.00	.531	4.76	4.76	.531	4.76
7X 7X .438/.750T	28.25	11.8	29.0	66.3	2.7	5.6	2.3	8.31	7.75	.438	7.00	.750	3.46	3.46	.750	3.46
12X 6X .375/.656T	28.70	23.0	43.6	193.2	4.6	8.4	4.4	8.44	12.66	.375	6.00	.656	4.81	4.81	.656	4.81
12X 7X .375/.594T	29.44	23.1	45.7	195.7	4.6	8.5	4.3	8.66	12.59	.375	7.00	.594	4.78	4.78	.594	4.78
14X 5X .438/.531T	29.85	29.6	42.4	256.1	5.2	8.6	6.0	8.78	14.53	.438	5.00	.531	6.43	6.43	.531	6.43
14X 5X .438/.594T	30.91	30.3	45.2	267.3	5.2	8.8	5.9	9.09	14.59	.438	5.00	.594	6.46	6.46	.594	6.46
12X 7X .375/.656T	30.91	30.3	49.0	203.6	4.6	8.7	4.2	9.09	12.66	.375	7.00	.656	4.81	4.81	.656	4.81
12X 8X .375/.594T	31.45	23.5	50.6	204.6	4.5	8.7	4.0	9.25	12.59	.375	8.00	.594	4.78	4.78	.594	4.78
14X 6X .438/.531T	31.65	30.5	47.6	273.0	5.2	8.9	5.7	9.31	14.53	.438	6.00	.531	6.43	6.43	.531	6.43
14X 5X .438/.656T	31.99	30.8	48.0	278.1	5.2	9.0	5.8	9.41	14.66	.438	5.00	.656	6.49	6.49	.656	6.49
7X 7X .500/.875T	32.74	13.0	32.4	74.4	2.7	5.7	2.3	9.63	7.88	.500	7.00	.875	4.02	4.02	.875	4.02
14X 6X .438/.594T	32.95	31.1	50.9	285.0	5.2	9.2	5.6	9.69	14.59	.438	6.00	.594	6.46	6.46	.594	6.46
14X 5X .438/.719T	33.05	31.4	50.7	288.3	5.3	9.2	5.7	9.72	14.72	.438	5.00	.719	6.52	6.52	.719	6.52
12X 8X .375/.656T	33.15	23.9	54.3	212.6	4.5	8.9	3.9	9.75	12.66	.375	8.00	.656	4.81	4.81	.656	4.81
7X 6X .563/1.000T	33.80	14.0	31.8	79.2	2.7	5.7	2.5	9.94	8.00	.563	6.00	1.000	4.59	4.59	.563	4.59

0.1563 - 5/32 in.

0.156 IN. PLATE (AREA= .73 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	FLANGE THICK	
14X 6X .438/.656T	34.20	31.7	54.3	296.5	5.2	9.4	5.5	10.06	14.66	.438	6.00	.656	6.49
14X 7X .438/.594T	34.95	31.9	56.7	308.8	5.2	9.4	5.3	10.28	14.59	.438	7.00	.594	6.46
12X 9X .375/.656T	35.39	24.2	59.5	220.5	4.4	9.1	3.7	10.41	12.66	.375	9.00	.656	4.81
14X 6X .438/.719T	35.50	32.2	57.5	307.4	5.2	9.5	5.3	10.44	14.72	.438	6.00	.719	6.52
14X 7X .438/.656T	36.45	32.4	60.5	312.8	5.2	9.6	5.2	10.72	14.66	.438	7.00	.656	6.49
14X 8X .438/.594T	36.99	32.5	62.4	315.0	5.2	9.7	5.0	10.88	14.59	.438	8.00	.594	6.46
7X 7X .563/1.000T	37.20	14.2	35.6	82.9	2.7	5.8	2.3	10.94	8.00	.563	7.00	1.000	4.59
16X 5X .500/.594T	37.30	40.3	56.3	393.1	5.8	9.8	7.0	10.97	16.59	.500	5.00	.594	8.37
14X 7X .438/.719T	37.94	33.0	64.3	324.3	5.2	9.8	5.0	11.16	14.72	.438	7.00	.719	6.52
16X 5X .500/.656T	38.35	41.1	59.3	408.0	5.8	9.9	6.9	11.28	16.66	.500	5.00	.656	8.41
14X 6X .438/.656T	38.69	33.0	66.6	327.3	5.2	9.9	4.9	11.38	14.66	.438	8.00	.656	6.49
16X 6X .500/.594T	39.30	41.5	62.8	418.5	5.8	10.1	6.7	11.56	16.59	.500	6.00	.594	8.37
16X 5X .500/.719T	39.41	41.8	62.5	422.6	5.9	10.1	6.8	11.59	16.72	.500	5.00	.719	8.44
12X 9X .438/.719T	39.85	26.8	64.6	243.9	4.4	9.1	3.8	11.72	12.72	.438	9.00	.719	5.64
14X 8X .438/.719T	40.39	33.6	71.0	339.0	5.2	10.1	4.8	11.88	14.72	.438	8.00	.719	6.52
16X 6X .500/.656T	40.60	42.3	66.5	434.8	5.9	10.3	6.5	11.94	16.66	.500	6.00	.656	8.41
16X 7X .500/.594T	41.34	42.6	69.3	443.5	5.9	10.4	6.4	12.16	16.59	.500	7.00	.594	8.37
7X 7X .625/1.125T	41.65	15.5	38.7	91.6	2.7	5.9	2.4	12.25	8.13	.625	7.00	1.125	5.18
16X 6X .500/.719T	41.85	43.0	70.3	450.5	5.9	10.5	6.4	12.31	16.72	.500	6.00	.719	8.44
16X 5X .500/.875T	42.09	43.4	70.1	456.9	5.9	10.5	6.5	12.38	16.88	.500	5.00	.875	8.52
12X 10X .438/.719T	42.30	27.1	70.3	251.9	4.4	9.3	3.6	12.44	12.72	.438	10.00	.719	5.64
16X 7X .500/.656T	42.81	43.3	73.6	450.8	5.9	10.6	6.2	12.59	16.66	.500	7.00	.656	8.41
14X 9X .438/.719T	42.81	34.1	77.7	352.4	5.1	10.3	4.5	12.59	14.72	.438	9.00	.719	6.52
16X 7X .500/.719T	44.30	44.1	78.0	475.4	5.9	10.8	6.1	13.03	16.72	.500	7.00	.719	8.44
16X 6X .500/.875T	45.05	44.7	79.4	487.2	5.9	10.9	6.1	13.25	16.88	.500	6.00	.875	8.52
16X 8X .500/.656T	45.05	44.3	80.7	480.6	5.9	10.9	6.0	13.25	16.66	.500	8.00	.656	8.41
14X 10X .438/.719T	45.25	34.5	84.2	364.3	5.1	10.5	4.3	13.31	14.72	.438	10.00	.719	6.52
7X 7X .688/1.250T	46.10	16.8	41.8	100.7	2.7	6.0	2.4	13.56	8.25	.688	7.00	1.250	5.78
16X 8X .500/.719T	46.75	45.0	85.8	498.0	5.9	11.1	5.8	13.75	16.72	.500	8.00	.719	8.44
16X 9X .500/.656T	47.29	45.0	87.8	508.6	5.8	11.1	5.7	13.91	16.66	.500	9.00	.656	8.41
18X 6X .563/.656T	47.80	55.0	80.7	615.4	6.4	11.2	7.6	14.06	16.66	.563	6.00	.656	10.59
16X 7X .500/.875T	48.04	45.7	88.6	514.0	5.9	11.2	5.8	14.13	16.88	.500	7.00	.875	8.52
18X 6X .563/.719T	49.10	56.0	85.0	636.9	6.5	11.4	7.5	14.44	18.72	.563	6.00	.719	10.63
16X 9X .500/.719T	49.20	45.8	93.4	518.3	5.8	11.3	5.5	14.47	16.72	.500	9.00	.719	8.44
16X 8X .500/.875T	51.00	46.6	97.8	537.8	5.8	11.5	5.5	15.00	16.88	.500	8.00	.875	8.52
18X 7X .563/.719T	51.54	57.4	93.7	671.9	6.5	11.7	7.2	15.16	18.72	.563	7.00	.719	10.63
16X 10X .500/.719T	51.65	46.4	101.0	536.9	5.8	11.6	5.3	15.19	16.72	.500	10.00	.719	8.44
18X 8X .563/.656T	52.29	57.7	96.7	679.7	6.5	11.8	7.0	15.38	18.66	.563	8.00	.656	10.59
14X 10X .500/.875T	53.55	38.7	98.4	410.0	5.0	10.8	4.2	15.75	14.88	.500	10.00	.875	7.52
16X 9X .500/.875T	53.99	47.4	106.9	559.1	5.8	11.8	5.2	15.88	16.88	.500	9.00	.875	8.52
18X 8X .563/.719T	53.99	58.7	102.3	703.8	6.5	12.0	6.9	15.88	18.72	.563	8.00	.719	10.63
18X 9X .563/.656T	54.50	58.8	104.6	708.0	6.5	12.0	6.8	16.03	18.66	.563	9.00	.656	10.59
18X 6X .563/1.000T	54.84	59.8	103.4	725.3	6.6	12.1	7.0	16.13	19.00	.563	6.00	1.000	10.78
18X 7X .563/.875T	55.25	59.6	105.7	725.7	6.5	12.2	6.9	16.25	18.88	.563	7.00	.875	10.72
18X 9X .563/.719T	56.41	59.8	110.9	733.1	6.5	12.3	6.6	16.59	18.72	.563	9.00	.719	10.63

0.1563 - 5/32 in.



.156 IN. PLATE (AREA = .73 SQ.IN.)

***** BEAM DIMENSIONS *****												
SECTION MODULUS												
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	SHEAR AREA
16X10X .500/ .875T	56.95	48.0	115.8	5.8	12.0	5.0	16.75	16.88	.500	10.00	.875	8.52
18X10X .563/ .719T	58.85	60.7	119.6	6.5	12.5	6.4	17.31	18.72	.563	10.00	.719	10.63
18X 8X .563/1.000T	61.64	62.5	126.7	6.4	12.8	6.3	18.13	19.80	.563	8.00	1.000	10.78
18X11X .563/ .875T	67.15	63.7	146.6	6.4	13.3	5.8	19.75	18.88	.563	11.00	.875	10.72
18X10X .563/1.000T	68.44	64.4	149.7	6.4	13.4	5.8	20.13	19.00	.563	10.00	1.000	10.78
18X12X .563/ .875T	70.14	64.5	156.5	6.4	13.5	5.6	20.63	18.88	.563	12.00	.875	10.72
18X 9X .625/1.125T	72.69	69.8	152.6	6.5	13.2	6.1	21.38	19.13	.625	9.00	1.125	12.05
21X 9X .688/ .875T	75.85	91.7	161.5	7.5	14.1	8.0	22.31	21.88	.688	9.00	.875	15.16
21X10X .688/ .875T	78.85	93.2	173.6	7.5	14.3	7.7	23.19	21.88	.688	10.00	.875	15.16
21X 8X .688/1.125T	79.70	94.5	174.5	7.5	14.5	7.8	23.44	22.13	.688	8.00	1.125	15.33
21X11X .688/ .875T	81.80	94.6	185.6	7.5	14.6	7.4	24.06	21.88	.688	11.00	.875	15.16
21X 9X .688/1.125T	83.50	96.3	189.5	7.5	14.8	7.5	24.56	22.13	.688	9.00	1.125	15.33
21X12X .688/ .875T	84.90	95.9	197.5	7.4	14.8	7.2	24.94	21.88	.688	12.00	.875	15.16
21X10X .688/1.125T	87.35	97.9	204.4	7.5	15.1	7.2	25.69	22.13	.688	10.00	1.125	15.33
21X13X .688/ .875T	87.75	97.1	209.2	7.4	15.1	7.0	25.81	21.88	.688	13.00	.875	15.16
24X10X .750/ .875T	90.95	124.2	212.3	8.4	15.8	9.2	26.75	24.88	.750	10.00	.875	18.78
24X 8X .750/1.125T	91.80	125.7	213.5	8.5	15.9	9.4	27.00	25.13	.750	8.00	1.125	18.96
24X11X .750/ .875T	93.94	126.2	225.9	8.5	16.1	9.0	27.63	24.88	.750	11.00	.875	18.78
24X 9X .750/1.125T	95.64	128.2	230.8	8.5	16.3	9.0	28.13	25.13	.750	9.00	1.125	18.96
24X12X .750/ .875T	96.90	128.0	239.6	8.5	16.3	8.7	28.50	24.88	.750	12.00	.875	18.78
24X10X .750/1.125T	99.45	130.5	248.1	8.5	16.6	8.7	29.25	25.13	.750	10.00	1.125	18.96
24X13X .750/ .875T	99.89	129.6	253.5	8.4	16.6	8.5	29.38	24.88	.750	13.00	.875	18.78
21X14X .688/1.125T	102.65	102.6	263.4	7.3	16.0	6.2	30.19	22.13	.688	14.00	1.125	15.33
21X15X .688/1.125T	106.45	103.5	277.8	7.2	16.2	6.0	31.31	22.13	.688	15.00	1.125	15.33
24X12X .750/1.125T	107.10	134.3	282.5	8.4	17.1	8.1	31.50	25.13	.750	12.00	1.125	18.96
24X13X .750/1.125T	110.94	135.9	299.6	8.4	17.4	7.9	32.63	25.13	.750	13.00	1.125	18.96
27X 9X .875/1.500T	126.24	185.9	337.3	9.5	18.5	10.2	37.13	28.50	.875	9.00	1.500	25.07
27X10X .875/1.375T	127.09	185.8	343.3	9.5	18.5	10.0	37.38	28.38	.875	10.00	1.375	24.97
27X13X .875/1.125T	130.05	186.4	362.4	9.5	18.7	9.6	38.25	28.13	.875	13.00	1.125	24.75
27X10X .875/1.500T	131.34	189.3	362.7	9.5	18.8	9.8	38.63	28.50	.875	10.00	1.500	25.07
27X11X .875/1.375T	131.75	188.8	366.9	9.5	18.8	9.7	38.75	28.38	.875	11.00	1.375	24.97
27X14X .875/1.125T	133.89	188.6	381.9	9.4	18.9	9.4	39.38	28.13	.875	14.00	1.125	24.75
27X15X .875/1.125T	137.70	190.7	401.0	9.4	19.2	9.1	40.50	28.13	.875	15.00	1.125	24.75
27X13X .875/1.500T	146.64	197.2	438.1	9.4	19.8	8.9	43.13	28.50	.875	13.00	1.500	25.07
30X10X1.000/1.375T	148.75	246.0	412.7	10.5	19.8	11.8	43.75	31.38	1.000	10.00	1.375	31.54
30X10X1.000/1.500T	153.00	250.6	434.6	10.5	20.1	11.6	45.00	31.50	1.000	10.00	1.500	31.66
30X11X1.000/1.375T	153.44	250.1	439.1	10.5	20.1	11.4	45.13	31.38	1.000	11.00	1.375	31.54
30X10X1.000/1.750T	161.50	258.9	477.4	10.5	20.7	11.2	47.50	31.75	1.000	10.00	1.750	31.91

0.1563 - 5/32 in.

•188 IN. PLATE (AREA= 1.05 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				DIMENSIONS				BEAM		FLANGE		SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X .125/.188T		2.55	3.0	1.4	3.3	1.4	1.1	2.3	.75	3.19	.125	2.00	.188	.42	
4X 2X .125/.188T		2.99	4.1	2.0	5.9	1.7	1.5	2.9	.88	4.19	.125	2.00	.188	.55	
3X 2X .188/.250T		3.60	3.2	1.9	4.0	1.4	1.3	2.2	1.06	3.25	.188	2.00	.250	.65	
3X 2X .188/.313T		4.05	3.3	2.2	4.6	1.4	1.4	2.1	1.19	3.31	.188	2.00	.313	.66	
3X 3X .188/.250T		4.45	3.4	2.6	5.0	1.5	1.5	1.9	1.31	3.25	.188	3.00	.250	.65	
4X 2X .188/.313T		4.69	4.5	3.1	9.3	1.8	1.8	2.7	1.38	4.31	.188	2.00	.313	.85	
5X 2X .188/.250T		4.90	5.5	3.5	11.7	2.2	2.1	3.3	1.44	5.25	.188	2.00	.250	1.02	
5X 2X .188/.313T		5.30	5.7	4.0	13.0	2.2	2.3	3.2	1.56	5.31	.188	2.00	.313	1.03	
6X 2X .188/.313T		5.95	7.0	5.1	19.1	2.6	2.7	3.8	1.75	6.31	.188	2.00	.313	1.22	
6X 3X .188/.250T		6.39	7.1	5.8	20.6	2.6	2.9	3.6	1.88	6.25	.188	3.00	.250	1.21	
4X 4X .188/.313T		6.80	4.9	5.3	11.4	1.9	2.3	2.1	2.00	4.31	.188	4.00	.313	.85	
6X 3X .188/.313T		7.00	7.4	6.7	22.8	2.7	3.1	3.4	2.06	6.31	.188	3.00	.313	1.22	
5X 4X .188/.313T		7.45	6.2	6.8	17.7	2.3	2.9	2.6	2.19	5.31	.188	4.00	.313	1.03	
6X 4X .188/.313T		8.09	7.6	8.3	25.8	2.7	3.4	3.1	2.38	6.31	.188	4.00	.313	1.22	
5X 3X .250/.438T		8.70	6.6	7.1	19.3	2.3	2.9	2.7	2.56	5.44	.250	3.00	.438	1.41	
7X 3X .250/.313T		9.15	9.3	8.5	33.3	3.0	3.6	3.9	2.69	7.31	.250	3.00	.313	1.87	
6X 3X .250/.438T		9.55	8.1	8.8	28.0	2.7	3.4	3.2	2.81	6.44	.250	3.00	.438	1.66	
7X 3X .250/.375T		9.79	9.5	9.5	36.1	3.0	3.8	3.8	2.88	7.38	.250	3.00	.375	1.89	
8X 3X .250/.313T		10.00	10.9	10.1	44.5	3.3	4.1	4.4	2.94	8.31	.250	3.00	.313	2.12	
7X 4X .250/.313T		10.20	9.6	10.3	37.3	3.0	3.9	3.6	3.00	7.31	.250	4.00	.313	1.87	
7X 3X .250/.438T		10.40	9.8	10.5	38.6	3.1	3.9	3.7	3.06	7.44	.250	3.00	.438	1.91	
8X 3X .250/.375T		10.64	11.2	11.2	48.1	3.4	4.3	4.3	3.13	8.38	.250	3.00	.375	2.14	
8X 4X .250/.313T		11.05	11.3	12.1	49.8	3.4	4.4	4.1	3.25	8.31	.250	4.00	.313	2.12	
8X 3X .250/.438T		11.25	11.5	12.3	51.4	3.4	4.5	4.2	3.31	8.44	.250	3.00	.438	2.16	
6X 5X .250/.375T		11.49	8.4	11.6	32.0	2.7	3.8	2.8	3.38	6.38	.250	5.00	.375	1.64	
8X 4X .250/.375T		11.90	11.6	13.6	53.8	3.4	4.6	4.0	3.50	8.38	.250	4.00	.375	2.14	
7X 5X .250/.375T		12.34	10.2	13.8	44.3	3.1	4.4	3.2	3.63	7.38	.250	5.00	.375	1.89	
6X 5X .250/.438T		12.55	8.6	13.0	34.3	2.7	4.0	2.6	3.69	6.44	.250	5.00	.438	1.66	
8X 4X .250/.438T		12.75	11.9	15.1	57.6	3.5	4.8	3.8	3.75	8.44	.250	4.00	.438	2.16	
8X 5X .250/.375T		13.19	12.0	16.1	58.8	3.5	4.9	3.7	3.88	8.38	.250	5.00	.375	2.14	
7X 5X .250/.438T		13.40	10.4	15.4	47.3	3.1	4.6	3.1	3.94	7.44	.250	5.00	.438	1.91	
6X 6X .250/.438T		14.04	8.7	15.0	36.6	2.7	4.2	2.4	4.13	6.44	.250	6.00	.438	1.66	
8X 5X .250/.438T		14.25	12.2	17.9	62.7	3.5	5.1	3.5	4.19	8.44	.250	5.00	.438	2.16	
9X 4X .313/.375T		14.65	14.4	16.4	73.3	3.7	5.1	4.5	4.31	9.38	.313	4.00	.375	2.99	
7X 6X .250/.438T		14.89	10.6	17.8	50.5	3.0	4.8	2.8	4.38	7.44	.250	6.00	.438	1.91	
9X 4X .313/.438T		15.50	14.8	18.0	78.1	3.7	5.3	4.3	4.56	9.44	.313	4.00	.438	3.01	
10X 4X .313/.375T		15.74	16.5	18.7	92.7	4.0	5.6	5.0	4.63	10.38	.313	4.00	.375	3.31	
8X 6X .250/.438T		15.74	12.5	20.6	67.0	3.4	5.4	3.3	4.63	8.44	.250	6.00	.438	2.16	
9X 5X .313/.375T		15.95	14.8	19.0	79.8	3.7	5.4	4.2	4.69	9.38	.313	5.00	.375	2.99	
9X 4X .313/.500T		16.35	15.1	19.6	82.7	3.8	5.5	4.2	4.81	9.50	.313	4.00	.500	3.03	
10X 4X .313/.438T		16.53	17.0	20.5	98.7	4.1	5.8	4.8	4.88	10.44	.313	4.00	.438	3.33	
10X 5X .313/.375T		17.00	17.1	21.6	100.8	4.1	5.9	4.7	5.00	10.38	.313	5.00	.375	3.31	
9X 4X .313/.563T		17.20	15.4	21.3	87.1	3.8	5.7	4.1	5.06	9.56	.313	4.00	.563	3.05	
10X 4X .313/.500T		17.44	17.3	22.4	104.3	4.1	6.0	4.7	5.13	10.50	.313	4.00	.500	3.35	
10X 5X .313/.438T		18.05	17.5	23.9	107.3	4.1	6.1	4.5	5.31	10.44	.313	5.00	.438	3.33	

0.1875 - 3/16 in.



188 IN. PLATE (AREA= 1.05 SQ.IN.)

***** BEAM DIMENSIONS *****														
***** FLANGE *****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														
*****														

0.1875 - 3/16 in.

.100 IN. PLATE (AREA= 1.05 SQ.IN.)

***** BEAM DIMENSIONS *****												
SECTION MODULUS												
NOMINAL SIZE		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE
14X 6X .438/ .656T	34.20	35.5	56.4	323.7	5.4	9.1	5.7	10.06	.438	6.00	.656	SHEAR AREA
14X 7X .438/ .594T	34.95	35.7	58.9	328.5	5.4	9.2	5.6	10.28	.438	7.00	.594	6.50
12X 9X .375/ .656T	35.39	27.7	62.2	246.3	4.6	8.9	4.0	10.41	.375	9.00	.656	6.47
14X 6X .438/ .719T	35.50	36.1	59.8	335.7	5.4	9.3	5.6	10.44	.438	6.00	.719	6.82
14X 7X .438/ .656T	36.45	36.3	62.9	341.8	5.4	9.4	5.4	10.72	.438	7.00	.656	6.50
14X 8X .438/ .594T	36.99	36.4	64.9	344.3	5.4	9.5	5.3	10.88	.438	8.00	.594	6.47
7X 7X .563/1.000T	37.28	16.4	37.7	93.4	2.8	5.7	2.5	10.94	.563	7.00	1.000	4.61
16X 5X .500/ .594T	37.38	44.4	58.3	422.7	5.9	9.5	7.2	10.97	.500	5.00	.594	8.39
14X 7X .438/ .719T	37.94	36.9	66.9	354.4	5.4	9.6	5.3	11.16	.438	7.00	.719	6.53
16X 5X .500/ .656T	38.35	45.2	61.5	438.8	6.0	9.7	7.1	11.28	.500	5.00	.656	8.42
14X 8X .438/ .656T	38.69	37.0	69.2	357.9	5.4	9.7	5.2	11.38	.438	8.00	.656	6.50
16X 6X .500/ .594T	39.30	45.7	65.1	450.2	6.0	9.9	6.9	11.56	.500	6.00	.594	8.39
16X 5X .500/ .719T	39.41	46.0	64.7	454.4	6.0	9.9	7.0	11.59	.500	5.00	.719	8.45
12X 9X .438/ .719T	39.85	30.3	67.4	269.7	4.6	8.9	4.0	11.72	.438	9.00	.719	5.65
14X 8X .438/ .719T	40.39	37.5	73.7	370.9	5.4	9.9	5.0	11.88	.438	8.00	.719	6.53
16X 6X .500/ .656T	40.60	46.5	68.9	467.8	6.0	10.1	6.8	11.94	.500	6.00	.656	8.42
16X 7X .500/ .594T	41.34	46.8	71.7	475.1	6.0	10.2	6.6	12.16	.500	7.00	.594	8.39
7X 7X .625/1.125T	41.65	17.7	40.8	102.5	2.8	5.8	2.5	12.25	.625	7.00	1.125	5.20
16X 6X .500/ .719T	41.85	47.3	72.0	484.8	6.0	10.2	6.7	12.31	.500	6.00	.719	8.45
16X 5X .500/ .875T	42.09	47.7	72.6	491.5	6.0	10.3	6.8	12.38	.500	5.00	.875	8.53
12X10X .438/ .719T	42.30	30.6	73.3	278.9	4.5	9.1	3.8	12.44	.438	10.00	.719	5.65
16X 7X .500/ .656T	42.81	47.6	76.2	493.8	6.0	10.4	6.5	12.59	.500	7.00	.656	8.42
14X 9X .438/ .719T	42.81	38.1	80.7	385.8	5.3	10.1	4.8	12.59	.438	9.00	.719	6.53
16X 7X .500/ .719T	44.30	48.4	80.8	511.8	6.0	10.6	6.3	13.03	.500	7.00	.719	8.45
16X 6X .500/ .875T	45.05	49.1	82.2	524.4	6.1	10.7	6.4	13.25	.500	6.00	.875	8.53
16X 8X .500/ .656T	45.05	48.6	83.5	517.5	6.0	10.6	6.2	13.25	.500	8.00	.656	8.42
14X10X .438/ .719T	45.25	38.6	87.5	399.1	5.3	10.3	4.6	13.31	.438	10.00	.719	6.53
7X 7X .688/1.250T	46.10	19.0	44.0	111.9	2.8	5.9	2.5	13.56	.688	7.00	1.250	5.81
16X 8X .500/ .719T	46.75	49.4	88.7	536.4	6.0	10.9	6.0	13.75	.500	8.00	.719	8.45
16X 9X .500/ .656T	47.29	49.4	90.8	539.3	6.0	10.9	5.9	13.91	.500	9.00	.656	8.42
16X 6X .563/ .656T	47.80	59.6	83.2	654.6	6.6	11.0	7.9	14.06	.563	6.00	.656	10.61
16X 7X .500/ .875T	48.04	50.2	91.7	553.6	6.0	11.0	6.0	14.13	.500	7.00	.875	8.53
18X 6X .563/ .719T	49.10	60.6	87.7	677.5	6.6	11.2	7.7	14.44	.563	6.00	.719	10.64
16X 9X .500/ .719T	49.20	50.2	96.6	558.6	6.0	11.1	5.8	14.47	.500	9.00	.719	8.45
16X 8X .500/ .875T	51.00	51.1	101.1	579.6	6.0	11.3	5.7	15.00	.500	8.00	.875	8.53
18X 7X .563/ .719T	51.54	62.1	96.6	714.9	6.6	11.5	7.4	15.16	.563	7.00	.719	10.64
16X10X .500/ .719T	51.65	50.9	104.4	578.9	6.0	11.4	5.5	15.19	.500	10.00	.719	8.45
18X 8X .563/ .656T	52.29	62.4	99.7	723.3	6.6	11.6	7.3	15.38	.563	8.00	.656	10.61
14X10X .500/ .875T	53.55	42.8	102.0	602.9	5.2	10.6	4.5	15.75	.500	10.00	.875	7.53
16X 9X .500/ .875T	53.99	51.9	110.5	602.9	6.0	11.6	5.5	15.88	.500	9.00	.875	8.53
18X 8X .563/ .719T	53.99	63.5	105.4	749.0	6.7	11.8	7.1	15.88	.563	8.00	.719	10.64
18X 9X .563/ .656T	54.50	63.6	107.8	753.7	6.6	11.9	7.0	16.03	.563	9.00	.656	10.61
18X 6X .563/1.000T	54.84	64.6	106.5	771.7	6.7	11.9	7.2	16.13	.563	6.00	1.000	10.80
18X 7X .563/ .875T	55.25	64.5	108.9	772.3	6.7	12.0	7.1	16.25	.563	7.00	.875	10.74
18X 9X .563/ .719T	56.41	64.6	114.2	780.4	6.7	12.1	6.8	16.59	.563	9.00	.719	10.64

0.1875 - 3/16 in.



•100 IN. PLATE (AREA= 1.05 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YF	***** BEAM DIMENSIONS *****			SHEAR AREA		
	WT/FT	ZPL	ZFL				DEPTH	WEB THICK	FLANGE WIDTH		THICK	
16X10X .500/.875T	56.95	52.6	119.7	623.8	5.9	11.9	5.2	16.75	.500	10.00	.875	8.53
18X10X .563/.719T	58.85	65.6	123.1	809.5	6.6	12.3	6.6	17.31	.563	10.00	.719	10.64
18X 8X .563/1.000T	61.64	67.5	130.5	853.3	6.7	12.6	6.5	18.13	.563	8.00	1.000	10.80
18X11X .563/.875T	67.15	68.8	150.9	901.3	6.6	13.1	6.0	19.75	.563	11.00	.875	10.74
18X10X .563/1.000T	68.44	69.6	154.1	919.5	6.6	13.2	6.0	20.13	.563	10.00	1.000	10.80
18X12X .563/.875T	70.14	69.6	161.0	986.8	6.5	13.3	5.8	20.63	.563	12.00	.875	10.74
18X 9X .625/1.125T	72.69	74.8	156.8	978.7	6.6	13.1	6.2	21.38	.625	9.00	1.125	12.07
21X 9X .688/.875T	75.85	97.2	165.3	1351.1	7.6	13.9	8.2	22.31	.688	9.00	.875	15.18
21X10X .688/.875T	78.85	98.9	177.6	1401.6	7.6	14.2	7.9	23.19	.688	10.00	.875	15.18
21X 8X .688/1.125T	79.70	100.2	178.6	1432.4	7.6	14.3	8.0	23.44	.688	8.00	1.125	15.35
21X11X .688/.875T	81.80	100.3	189.9	1448.5	7.6	14.4	7.6	24.06	.688	11.00	.875	15.18
21X 9X .688/1.125T	83.50	102.0	193.9	1492.2	7.6	14.6	7.7	24.56	.688	9.00	1.125	15.35
21X12X .688/.875T	84.80	101.7	202.0	1492.4	7.6	14.7	7.4	24.94	.688	12.00	.875	15.18
21X10X .688/1.125T	87.35	103.7	209.1	1546.9	7.6	14.9	7.4	25.69	.688	10.00	1.125	15.35
21X13X .688/.875T	87.75	102.9	214.0	1533.1	7.6	14.9	7.2	25.81	.688	13.00	.875	15.18
24X10X .750/.875T	90.95	130.4	216.5	2040.5	8.6	15.6	9.4	26.75	.750	10.00	.875	18.80
24X 8X .750/1.125T	91.80	132.0	217.9	2081.0	8.6	15.8	9.6	27.00	.750	8.00	1.125	18.99
24X11X .750/.875T	93.94	132.5	230.4	2108.8	8.6	15.9	9.2	27.63	.750	11.00	.875	18.80
24X 9X .750/1.125T	95.64	134.6	235.4	2168.3	8.6	16.1	9.2	28.13	.750	9.00	1.125	18.99
24X12X .750/.875T	96.90	134.4	244.3	2173.3	8.6	16.2	8.9	28.50	.750	12.00	.875	18.80
24X13X .750/.875T	99.89	136.1	258.4	2234.3	8.6	16.4	8.6	29.38	.750	13.00	.875	18.80
21X14X .688/1.125T	102.65	108.6	269.3	1727.0	7.4	15.9	6.4	30.19	.688	14.00	1.125	15.35
21X15X .688/1.125T	106.45	109.5	284.1	1764.2	7.4	16.1	6.2	31.31	.688	15.00	1.125	15.35
24X12X .750/1.125T	107.10	140.8	287.9	2394.5	8.6	17.0	8.3	31.50	.750	12.00	1.125	18.99
24X13X .750/1.125T	110.94	142.5	305.4	2459.9	8.5	17.3	8.1	32.63	.750	13.00	1.125	18.99
27X 9X .875/1.500T	126.24	193.1	342.8	3543.7	9.6	18.3	10.3	37.13	.875	9.00	1.500	25.10
27X10X .875/1.375T	127.09	193.0	348.8	3548.9	9.6	18.4	10.2	37.38	.875	10.00	1.375	25.00
27X13X .875/1.125T	130.05	193.6	368.1	3592.6	9.6	18.6	9.8	38.25	.875	13.00	1.125	24.78
27X11X .875/1.500T	131.34	196.5	368.5	3676.6	9.6	18.7	10.0	38.63	.875	10.00	1.500	25.10
27X11X .875/1.375T	131.75	196.0	372.7	3669.6	9.6	18.7	9.8	38.75	.875	11.00	1.375	25.00
27X15X .875/1.125T	133.89	195.9	387.9	3685.3	9.5	18.8	9.5	39.38	.875	14.00	1.125	24.78
27X15X .875/1.125T	137.70	198.0	407.2	3772.6	9.5	19.1	9.3	40.50	.875	15.00	1.125	24.78
30X10X1.000/1.500T	146.64	204.7	444.9	4021.3	9.5	19.6	9.0	43.13	.875	13.00	1.500	25.10
30X10X1.000/1.375T	148.75	253.8	418.2	4985.4	10.5	19.6	11.9	43.75	1.000	10.00	1.375	31.57
30X10X1.000/1.500T	153.00	258.4	448.4	5158.9	10.6	20.0	11.7	45.00	1.000	10.00	1.500	31.69
30X11X1.000/1.375T	153.44	257.9	444.9	5158.0	10.6	20.0	11.6	45.13	1.000	11.00	1.375	31.57
30X10X1.000/1.750T	161.50	266.9	463.7	5492.5	10.6	20.6	11.4	47.50	1.000	10.00	1.750	31.94

0.1875 - 3/16 in.

219 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				INERTIA				R		YP		VF		AREA		DEPTH		WEB		DIMENSIONS		FLANGE		SHEAR	
		WT/FT		ZPL		ZFL																					
3X 2X	.125/.188T	2.55	3.9	1.5	3.7	1.3	1.3	.9	2.5	.75	3.19	.125	2.00	.188	.43												
4X 2X	.125/.188T	2.99	5.2	2.1	6.5	1.7	1.7	1.3	3.2	.88	4.19	.125	2.00	.188	.55												
3X 2X	.188/.250T	3.60	4.1	1.9	4.5	1.3	1.3	1.1	2.4	1.06	3.25	.188	2.00	.250	.65												
3X 2X	.188/.313T	4.05	4.2	2.3	5.2	1.4	1.4	1.2	2.3	1.19	3.31	.188	2.00	.313	.66												
3X 3X	.188/.250T	4.45	4.3	2.7	5.7	1.4	1.4	1.3	2.1	1.31	3.25	.188	3.00	.250	.65												
4X 2X	.188/.313T	4.69	5.7	3.2	9.3	1.8	1.8	1.6	2.9	1.38	4.31	.188	2.00	.313	.85												
5X 2X	.188/.250T	4.90	7.0	3.6	13.1	2.1	1.9	3.6	3.6	1.44	5.25	.188	2.00	.250	1.03												
5X 2X	.188/.313T	5.30	7.3	4.2	14.7	2.2	2.0	3.5	3.5	1.56	5.31	.188	2.00	.313	1.04												
6X 2X	.188/.313T	5.95	8.9	5.3	21.6	2.6	2.4	2.4	4.1	1.75	6.31	.188	2.00	.313	1.23												
6X 3X	.188/.250T	6.39	9.0	6.0	23.3	2.6	2.6	2.6	3.9	1.88	6.25	.188	3.00	.250	1.22												
4X 4X	.188/.313T	6.80	6.2	5.5	13.2	2.0	2.1	2.4	2.4	2.00	4.31	.188	4.00	.313	.85												
6X 3X	.188/.313T	7.00	9.3	6.9	25.9	2.7	2.8	3.7	3.7	2.06	6.31	.188	3.00	.313	1.23												
5X 4X	.188/.313T	7.45	7.9	7.0	20.5	2.4	2.6	2.9	2.9	2.19	5.31	.188	4.00	.313	1.04												
6X 4X	.188/.313T	8.09	9.6	8.6	29.7	2.8	3.1	3.4	3.4	2.38	6.31	.188	4.00	.313	1.23												
5X 3X	.250/.438T	8.70	8.3	7.4	22.1	2.4	2.7	3.0	3.2	2.56	5.44	.250	3.00	.438	1.41												
7X 3X	.250/.313T	9.15	11.4	8.9	37.7	3.0	3.3	3.6	4.0	2.69	7.31	.250	3.00	.313	1.88												
6X 3X	.250/.438T	9.55	10.1	9.1	32.0	2.7	3.2	3.5	3.5	2.81	6.44	.250	3.00	.438	1.66												
7X 3X	.250/.375T	9.79	11.8	9.9	40.9	3.1	3.5	4.1	4.1	2.88	7.38	.250	3.00	.375	1.90												
8X 3X	.250/.313T	10.00	13.4	10.5	50.3	3.4	3.8	4.8	4.8	2.94	8.31	.250	3.00	.313	2.13												
7X 4X	.250/.313T	10.20	11.9	10.7	42.5	3.1	3.6	4.0	4.0	3.00	7.31	.250	4.00	.313	1.88												
7X 3X	.250/.438T	10.40	12.0	11.0	43.9	3.1	3.6	4.0	4.0	3.06	7.44	.250	3.00	.438	1.91												
8X 3X	.250/.375T	10.64	13.7	11.7	54.4	3.5	4.0	4.6	4.6	3.13	8.38	.250	3.00	.375	2.15												
8X 4X	.250/.313T	11.05	13.9	12.7	56.5	3.5	4.1	4.5	4.5	3.25	8.31	.250	4.00	.313	2.13												
8X 3X	.250/.438T	11.25	14.1	12.9	58.3	3.5	4.1	4.5	4.5	3.31	8.44	.250	3.00	.438	2.16												
6X 5X	.250/.375T	11.49	10.5	12.1	37.0	2.8	3.5	3.1	3.1	3.38	6.38	.250	5.00	.375	1.65												
8X 4X	.250/.375T	11.90	14.2	14.2	61.1	3.5	4.3	4.3	4.3	3.50	8.38	.250	4.00	.375	2.15												
7X 5X	.250/.375T	12.34	12.5	14.4	50.9	3.2	4.1	3.5	3.5	3.63	7.38	.250	5.00	.375	1.90												
6X 5X	.250/.438T	12.55	10.7	13.6	39.9	2.8	3.7	2.9	2.9	3.69	6.44	.250	5.00	.438	1.66												
8X 4X	.250/.438T	12.75	14.6	15.8	65.7	3.6	4.5	4.2	4.2	3.75	8.44	.250	4.00	.438	2.16												
8X 5X	.250/.375T	13.19	14.6	16.8	67.2	3.6	4.6	4.0	4.0	3.88	8.38	.250	5.00	.375	2.15												
7X 5X	.250/.438T	13.40	12.8	16.1	54.6	3.2	4.3	3.4	3.4	3.94	7.44	.250	5.00	.438	1.91												
6X 6X	.250/.438T	14.04	10.9	15.7	42.8	2.8	3.9	2.7	2.7	4.13	6.44	.250	6.00	.438	1.66												
8X 5X	.250/.438T	14.25	15.0	18.7	71.9	3.6	4.8	4.8	4.8	4.19	8.44	.250	5.00	.438	2.16												
9X 4X	.313/.375T	14.65	17.2	17.1	82.4	3.8	4.8	4.8	4.8	4.31	9.38	.313	4.00	.375	3.00												
7X 6X	.250/.438T	14.89	13.0	18.6	56.6	3.2	4.5	3.2	3.2	4.38	7.44	.250	6.00	.438	1.91												
9X 4X	.313/.438T	15.50	17.6	18.9	88.0	3.8	5.0	4.7	4.7	4.56	9.44	.313	4.00	.438	3.02												
10X 4X	.313/.375T	15.74	19.6	19.6	103.8	4.1	5.3	5.3	5.3	4.63	10.38	.313	4.00	.375	3.32												
8X 6X	.250/.438T	15.74	15.2	21.5	77.2	3.6	5.1	3.6	3.6	4.63	8.44	.250	6.00	.438	2.16												
9X 5X	.313/.375T	15.95	17.7	19.9	90.0	3.8	5.1	4.5	4.5	4.69	9.38	.313	5.00	.375	3.00												
9X 4X	.313/.500T	16.35	18.0	20.5	93.3	3.9	5.2	4.5	4.5	4.81	9.50	.313	4.00	.500	3.04												
10X 4X	.313/.438T	16.59	20.1	21.5	110.7	4.2	5.5	5.2	5.2	4.88	10.44	.313	4.00	.438	3.34												
10X 5X	.313/.375T	17.00	20.2	22.6	113.2	4.2	5.6	5.0	5.0	5.00	10.38	.313	5.00	.375	3.32												
9X 4X	.313/.563T	17.20	18.4	22.3	98.4	3.9	5.4	4.4	4.4	5.06	9.56	.313	4.00	.563	3.06												
10X 4X	.313/.500T	17.44	20.6	23.4	117.2	4.2	5.7	5.0	5.0	5.13	10.50	.313	4.00	.500	3.35												
10X 5X	.313/.438T	18.05	20.7	25.0	120.7	4.2	5.8	4.8	4.8	5.31	10.44	.313	5.00	.438	3.34												

0.2188 - 7/32 in.



.219 IN. PLATE (AREA= 1.44 SQ.IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										FLANGE		SHEAR	
NOMINAL SIZE	WT/FT	ZPL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA	THICK	AREA	THICK	AREA	THICK	AREA	THICK	FLANGE	THICK	AREA	THICK
10X 4X .313/.563T	18.29	21.0	25.2	123.3	4.3	5.9	5.38	10.56	.313	4.00	.563	3.37	.313	3.37	.313	3.37	.313	3.37	.313	4.00	.563	3.37	.313
9X 6X .313/.438T	18.50	18.6	25.2	103.2	3.9	5.6	5.44	9.44	.313	6.00	.438	3.02	.313	3.02	.313	3.02	.313	3.02	.313	6.00	.438	3.02	.313
10X 5X .313/.500T	19.14	21.2	27.3	127.7	4.3	6.0	5.69	10.50	.313	5.00	.500	3.35	.313	3.35	.313	3.35	.313	3.35	.313	5.00	.500	3.35	.313
7X 7X .313/.500T	19.35	14.1	23.6	68.1	3.1	4.8	5.69	7.50	.313	7.00	.500	2.42	.313	2.42	.313	2.42	.313	2.42	.313	7.00	.500	2.42	.313
10X 6X .313/.438T	19.55	21.2	28.4	129.4	4.2	6.1	5.75	10.44	.313	6.00	.438	3.34	.313	3.34	.313	3.34	.313	3.34	.313	6.00	.438	3.34	.313
9X 6X .313/.500T	19.75	18.9	27.6	109.2	3.9	5.8	5.81	9.50	.313	6.00	.500	3.04	.313	3.04	.313	3.04	.313	3.04	.313	6.00	.500	3.04	.313
10X 5X .313/.563T	20.20	21.5	29.6	134.4	4.3	6.2	5.94	10.56	.313	5.00	.563	3.37	.313	3.37	.313	3.37	.313	3.37	.313	5.00	.563	3.37	.313
7X 7X .313/.563T	20.84	14.3	25.8	71.5	3.1	5.0	6.13	7.56	.313	7.00	.563	2.43	.313	2.43	.313	2.43	.313	2.43	.313	7.00	.563	2.43	.313
10X 6X .313/.500T	20.84	21.6	31.2	136.9	4.3	6.3	6.13	10.50	.313	6.00	.500	3.35	.313	3.35	.313	3.35	.313	3.35	.313	6.00	.500	3.35	.313
9X 7X .313/.500T	21.45	19.2	31.1	115.5	3.9	6.0	6.31	9.50	.313	7.00	.500	3.04	.313	3.04	.313	3.04	.313	3.04	.313	7.00	.500	3.04	.313
12X 4X .375/.469T	21.69	27.2	29.4	179.4	4.8	6.6	6.1	12.47	.375	4.00	.469	4.76	.375	4.76	.375	4.76	.375	4.76	.375	4.00	.469	4.76	.375
8X 7X .313/.563T	21.90	16.9	29.9	94.7	3.5	5.6	6.44	8.56	.313	7.00	.563	2.75	.313	2.75	.313	2.75	.313	2.75	.313	7.00	.563	2.75	.313
10X 6X .313/.563T	22.10	22.0	33.9	143.9	4.3	6.5	6.50	10.56	.313	6.00	.563	3.37	.313	3.37	.313	3.37	.313	3.37	.313	6.00	.563	3.37	.313
10X 7X .313/.500T	22.54	22.0	35.1	144.9	4.2	6.6	6.53	10.50	.313	7.00	.500	3.35	.313	3.35	.313	3.35	.313	3.35	.313	7.00	.500	3.35	.313
12X 4X .375/.531T	22.54	27.8	31.6	188.5	4.8	6.8	6.63	12.53	.375	4.00	.531	4.78	.375	4.78	.375	4.78	.375	4.78	.375	4.00	.531	4.78	.375
12X 5X .375/.469T	23.26	28.1	33.8	194.7	4.9	6.9	6.84	12.47	.375	5.00	.469	4.76	.375	4.76	.375	4.76	.375	4.76	.375	5.00	.469	4.76	.375
12X 4X .375/.594T	23.39	28.3	33.8	197.3	4.9	7.0	6.88	12.59	.375	4.00	.594	4.80	.375	4.80	.375	4.80	.375	4.80	.375	4.00	.594	4.80	.375
7X 7X .375/.625T	23.80	15.2	28.0	77.5	3.0	5.1	7.00	7.63	.375	7.00	.625	2.94	.375	2.94	.375	2.94	.375	2.94	.375	7.00	.625	2.94	.375
10X 7X .313/.563T	24.00	22.4	38.2	152.0	4.2	6.8	7.06	10.56	.313	7.00	.563	3.37	.313	3.37	.313	3.37	.313	3.37	.313	7.00	.563	3.37	.313
12X 4X .375/.656T	24.24	28.8	35.8	205.6	4.9	7.1	7.13	12.66	.375	4.00	.656	4.83	.375	4.83	.375	4.83	.375	4.83	.375	4.00	.656	4.83	.375
12X 5X .375/.531T	24.34	28.7	36.5	204.8	4.9	7.1	7.16	12.53	.375	5.00	.531	4.78	.375	4.78	.375	4.78	.375	4.78	.375	5.00	.531	4.78	.375
9X 8X .313/.563T	24.85	19.8	37.8	127.1	3.8	6.4	7.31	9.56	.313	8.00	.563	3.06	.313	3.06	.313	3.06	.313	3.06	.313	8.00	.563	3.06	.313
12X 6X .375/.469T	24.95	28.8	38.1	208.2	4.9	7.2	7.31	12.47	.375	6.00	.469	4.76	.375	4.76	.375	4.76	.375	4.76	.375	6.00	.469	4.76	.375
12X 5X .375/.594T	25.40	29.2	39.1	214.3	4.9	7.3	7.47	12.59	.375	5.00	.594	4.80	.375	4.80	.375	4.80	.375	4.80	.375	5.00	.594	4.80	.375
10X 8X .313/.563T	25.94	22.7	42.6	159.5	4.2	7.0	7.63	10.56	.313	8.00	.563	3.37	.313	3.37	.313	3.37	.313	3.37	.313	8.00	.563	3.37	.313
12X 6X .375/.531T	26.15	29.4	41.3	219.1	4.9	7.4	7.69	12.53	.375	6.00	.531	4.78	.375	4.78	.375	4.78	.375	4.78	.375	6.00	.531	4.78	.375
12X 5X .375/.656T	26.45	29.7	41.7	223.6	4.9	7.5	7.78	12.66	.375	5.00	.656	4.83	.375	4.83	.375	4.83	.375	4.83	.375	5.00	.656	4.83	.375
12X 7X .375/.469T	26.45	29.4	42.4	220.4	4.9	7.5	7.78	12.47	.375	7.00	.469	4.76	.375	4.76	.375	4.76	.375	4.76	.375	7.00	.469	4.76	.375
7X 7X .438/.688T	26.79	16.2	30.2	83.4	3.0	5.2	7.88	7.69	.438	7.00	.688	3.46	.438	3.46	.438	3.46	.438	3.46	.438	7.00	.688	3.46	.438
12X 6X .375/.594T	27.40	29.9	44.5	229.2	4.9	7.7	8.06	12.59	.375	6.00	.594	4.80	.375	4.80	.375	4.80	.375	4.80	.375	6.00	.594	4.80	.375
12X 7X .375/.531T	27.95	30.0	46.2	231.9	4.9	7.7	8.22	12.53	.375	7.00	.531	4.78	.375	4.78	.375	4.78	.375	4.78	.375	7.00	.531	4.78	.375
7X 7X .438/.750T	28.25	16.4	32.2	86.8	3.0	5.3	8.31	7.75	.438	7.00	.750	3.49	.438	3.49	.438	3.49	.438	3.49	.438	7.00	.750	3.49	.438
12X 6X .375/.656T	28.70	30.4	47.5	238.9	4.9	7.9	8.44	12.66	.375	6.00	.656	4.83	.375	4.83	.375	4.83	.375	4.83	.375	6.00	.656	4.83	.375
12X 7X .375/.594T	29.44	30.5	49.8	242.5	4.9	7.9	8.66	12.59	.375	7.00	.594	4.80	.375	4.80	.375	4.80	.375	4.80	.375	7.00	.594	4.80	.375
14X 5X .438/.531T	29.85	37.6	45.9	304.9	5.5	8.1	6.6	14.53	.438	5.00	.531	6.46	.438	6.46	.438	6.46	.438	6.46	.438	5.00	.531	6.46	.438
14X 5X .438/.594T	30.91	38.3	48.9	318.3	5.5	8.3	6.5	9.09	.438	5.00	.594	6.49	.438	6.49	.438	6.49	.438	6.49	.438	5.00	.594	6.49	.438
12X 7X .375/.656T	30.91	31.0	53.4	252.7	4.9	8.1	9.09	14.59	.375	7.00	.656	4.83	.375	4.83	.375	4.83	.375	4.83	.375	7.00	.656	4.83	.375
12X 8X .375/.594T	31.45	31.0	55.1	254.2	4.9	8.2	9.25	12.59	.375	8.00	.594	4.80	.375	4.80	.375	4.80	.375	4.80	.375	8.00	.594	4.80	.375
14X 6X .438/.531T	31.65	38.6	51.5	325.5	5.5	8.4	6.3	9.31	.438	5.00	.531	6.52	.438	6.52	.438	6.52	.438	6.52	.438	5.00	.531	6.52	.438
14X 5X .438/.656T	31.99	39.0	51.9	331.4	5.5	8.5	6.4	9.41	.438	5.00	.656	6.56	.438	6.56	.438	6.56	.438	6.56	.438	5.00	.656	6.56	.438
7X 7X .500/.875T	32.74	17.7	36.0	96.0	2.9	5.4	2.7	9.63	.500	7.00	.875	4.05	.500	4.05	.500	4.05	.500	4.05	.500	7.00	.875	4.05	.500
14X 6X .438/.594T	32.95	39.4	55.1	340.0	5.5	8.6	6.2	9.69	.438	5.00	.594	6.49	.438	6.49	.438	6.49	.438	6.49	.438	5.00	.594	6.49	.438
14X 5X .438/.719T	33.05	39.6	54.9	343.8	5.6	8.7	6.3	9.72	.438	5.00	.719	6.54	.438	6.54	.438	6.54	.438	6.54	.438	5.00	.719	6.54	.438
12X 8X .375/.656T	33.15	31.5	59.2	264.6	4.9	8.4	4.5	9.75	.375	8.00	.656	4.83	.375	4.83	.375	4.83	.375	4.83	.375	8.00	.656	4.83	.375
7X 6X .563/1.000T	33.80	18.6	35.3	100.2	3.0	5.4	2.8	9.94	.563	6.00	1.000	4.63	.563	4.63	.563	4.63	.563	4.63	.563	6.00	1.000	4.63	.563

0.2188 - 7/32 in.

.219 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		BEAM DIMENSIONS		SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA
14X 6X .438/.656T	34.20	40.0	58.7	354.1	5.5	8.8	6.0 10.06
14X 7X .438/.594T	34.95	40.2	61.2	359.5	5.5	8.9	5.9 10.28
14X 8X .438/.556T	35.39	31.9	64.8	375.2	4.8	8.6	4.2 10.41
14X 9X .438/.519T	35.50	40.7	62.2	367.4	5.6	9.0	5.9 10.44
14X 10X .438/.482T	36.45	40.9	65.3	374.3	5.5	9.1	5.7 10.72
14X 11X .438/.445T	36.99	41.0	67.3	377.2	5.5	9.2	5.6 10.88
14X 12X .438/.408T	37.20	18.9	39.7	105.3	2.9	5.6	2.7 10.94
14X 13X .438/.371T	37.30	49.2	60.5	456.1	6.1	9.3	7.5 10.97
14X 14X .438/.334T	37.94	41.5	69.5	388.3	5.6	9.3	5.6 11.16
14X 15X .438/.297T	38.35	50.1	63.7	473.5	6.1	9.4	7.4 11.28
14X 16X .438/.260T	38.69	41.6	71.9	392.3	5.5	9.4	5.5 11.38
14X 17X .438/.223T	39.30	50.6	67.4	485.9	6.1	9.6	7.2 11.56
14X 18X .438/.186T	39.41	50.9	67.1	490.4	6.1	9.6	7.3 11.59
14X 19X .438/.149T	39.85	34.4	70.2	298.9	4.8	8.7	4.3 11.72
14X 20X .438/.112T	40.39	42.2	76.6	406.8	5.5	9.6	5.3 11.88
14X 21X .438/.075T	40.60	51.5	71.4	505.0	6.1	9.8	7.1 11.94
14X 22X .438/.038T	41.34	51.8	74.3	513.1	6.1	9.9	6.9 12.16
14X 23X .438/.001T	41.65	20.2	43.0	114.8	2.9	5.7	2.7 12.25
14X 24X .438/.000T	41.85	52.4	75.4	523.4	6.2	10.0	6.9 12.31
14X 25X .438/.000T	42.09	52.8	75.2	530.6	6.2	10.0	7.1 12.38
14X 26X .438/.000T	42.30	34.8	76.3	309.4	4.7	8.9	4.1 12.44
14X 27X .438/.000T	42.81	52.7	78.9	533.5	6.2	10.1	6.8 12.59
14X 28X .438/.000T	42.81	42.9	83.8	423.6	5.5	9.9	5.1 12.59
14X 29X .438/.000T	44.30	53.6	83.6	553.0	6.2	10.3	6.6 13.03
14X 30X .438/.000T	45.05	54.3	85.1	566.6	6.2	10.4	6.7 13.25
14X 31X .438/.000T	45.05	53.8	86.4	559.4	6.2	10.4	6.5 13.25
14X 32X .438/.000T	45.25	43.4	90.8	438.6	5.5	10.1	4.8 13.31
14X 33X .438/.000T	46.10	21.6	46.3	124.6	2.9	5.8	2.7 13.56
14X 34X .438/.000T	46.75	54.6	91.8	580.0	6.2	10.6	6.3 13.75
14X 35X .438/.000T	47.29	54.7	93.9	583.3	6.2	10.7	6.2 13.91
14X 36X .438/.000T	47.80	65.1	85.9	699.2	6.7	10.7	8.1 14.06
14X 37X .438/.000T	48.04	55.5	94.9	598.6	6.2	10.8	6.3 14.13
14X 38X .438/.000T	49.10	66.2	90.5	723.8	6.8	10.9	8.0 14.44
14X 39X .438/.000T	49.20	55.5	99.9	604.4	6.2	10.9	6.0 14.47
14X 40X .438/.000T	51.00	56.5	104.7	627.2	6.2	11.1	6.0 15.00
14X 41X .438/.000T	51.54	67.8	99.6	763.9	6.8	11.3	7.7 15.16
14X 42X .438/.000T	51.65	56.3	108.0	626.7	6.1	11.1	5.8 15.19
14X 43X .438/.000T	52.29	68.1	102.8	773.1	6.8	11.4	7.5 15.38
14X 44X .438/.000T	53.55	47.7	105.8	496.3	5.4	10.4	4.7 15.75
14X 45X .438/.000T	53.99	57.3	114.3	652.9	6.1	11.4	5.7 15.88
14X 46X .438/.000T	53.99	69.2	108.7	800.7	6.8	11.6	7.4 15.88
14X 47X .438/.000T	54.50	69.3	111.1	805.8	6.8	11.6	7.3 16.03
14X 48X .438/.000T	54.84	70.4	109.9	824.6	6.9	11.7	7.5 16.13
14X 49X .438/.000T	55.25	70.3	112.3	825.5	6.8	11.7	7.3 16.25
14X 50X .438/.000T	56.41	70.4	117.8	834.6	6.8	11.9	7.1 16.59
14X 51X .438/.000T							
14X 52X .438/.000T							
14X 53X .438/.000T							
14X 54X .438/.000T							
14X 55X .438/.000T							
14X 56X .438/.000T							
14X 57X .438/.000T							
14X 58X .438/.000T							
14X 59X .438/.000T							
14X 60X .438/.000T							
14X 61X .438/.000T							
14X 62X .438/.000T							
14X 63X .438/.000T							
14X 64X .438/.000T							
14X 65X .438/.000T							
14X 66X .438/.000T							
14X 67X .438/.000T							
14X 68X .438/.000T							
14X 69X .438/.000T							
14X 70X .438/.000T							
14X 71X .438/.000T							
14X 72X .438/.000T							
14X 73X .438/.000T							
14X 74X .438/.000T							
14X 75X .438/.000T							
14X 76X .438/.000T							
14X 77X .438/.000T							
14X 78X .438/.000T							
14X 79X .438/.000T							
14X 80X .438/.000T							
14X 81X .438/.000T							
14X 82X .438/.000T							
14X 83X .438/.000T							
14X 84X .438/.000T							
14X 85X .438/.000T							
14X 86X .438/.000T							
14X 87X .438/.000T							
14X 88X .438/.000T							
14X 89X .438/.000T							
14X 90X .438/.000T							
14X 91X .438/.000T							
14X 92X .438/.000T							
14X 93X .438/.000T							
14X 94X .438/.000T							
14X 95X .438/.000T							
14X 96X .438/.000T							
14X 97X .438/.000T							
14X 98X .438/.000T							
14X 99X .438/.000T							
14X 100X .438/.000T							

0.2188 - 7/32 in.



•219 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	DIMENSIONS		SHEAR AREA
WT/FT	ZPL	ZFL	WIDTH	THICK							FLANGE	THICK	
16X10X .500/ .875T	56.95	58.1	123.8	676.0	6.1	11.6	5.5	16.75	16.88	.500	10.00	.875	8.55
18X10X .563/ .719T	58.85	71.5	126.9	866.0	6.8	12.1	6.8	17.31	18.72	.563	10.00	.719	10.66
18X 8X .563/1.000T	61.64	73.4	134.5	912.8	6.8	12.4	6.8	18.13	19.00	.563	8.00	1.000	10.82
18X11X .563/ .875T	67.15	74.9	155.4	965.1	6.7	12.9	6.2	19.75	18.88	.563	11.00	.875	10.75
18X10X .563/1.000T	68.44	75.6	158.8	984.7	6.8	13.0	6.2	20.13	19.00	.563	10.00	1.000	10.82
18X12X .563/ .875T	70.14	75.7	165.9	992.9	6.7	13.1	6.0	20.63	18.88	.563	12.00	.875	10.75
18X 9X .625/1.125T	72.69	80.9	161.4	1042.5	6.8	12.9	6.5	21.38	19.13	.625	9.00	1.125	12.09
21X 9X .688/ .875T	75.85	103.9	169.5	1423.2	7.7	13.7	8.4	22.31	21.88	.688	9.00	.875	15.20
21X10X .688/ .875T	78.85	105.6	182.1	1476.7	7.7	14.0	8.1	23.19	21.88	.688	10.00	.875	15.20
21X 8X .688/1.125T	79.70	106.9	183.2	1508.8	7.8	14.1	8.2	23.44	22.13	.688	8.00	1.125	15.38
21X11X .688/ .875T	81.80	107.1	194.6	1526.5	7.7	14.3	7.8	24.06	21.88	.688	11.00	.875	15.20
21X 9X .688/1.125T	83.50	108.9	198.8	1572.2	7.8	14.4	7.9	24.56	22.13	.688	9.00	1.125	15.38
21X12X .688/ .875T	84.80	108.5	207.0	1573.1	7.7	14.5	7.6	24.94	21.88	.688	12.00	.875	15.20
21X10X .688/1.125T	87.35	110.6	214.3	1630.3	7.8	14.7	7.6	25.69	22.13	.688	10.00	1.125	15.38
21X13X .688/ .875T	87.75	109.8	219.2	1616.3	7.7	14.7	7.4	25.81	21.88	.688	13.00	.875	15.20
24X10X .750/ .875T	90.95	137.9	221.3	2132.2	8.7	15.5	9.6	26.75	24.88	.750	10.00	.875	18.82
24X 8X .750/1.125T	91.80	139.5	222.7	2174.1	8.7	15.6	9.8	27.00	25.13	.750	8.00	1.125	19.01
24X11X .750/ .875T	93.94	140.0	235.4	2203.8	8.7	15.7	9.4	27.63	24.88	.750	11.00	.875	18.82
24X 9X .750/1.125T	95.64	142.2	240.6	2265.6	8.8	15.9	9.4	28.13	25.13	.750	9.00	1.125	19.01
24X12X .750/ .875T	96.90	142.0	249.6	2271.3	8.7	16.0	9.1	28.50	24.88	.750	12.00	.875	18.82
24X10X .750/1.125T	99.45	144.6	258.5	2350.6	8.8	16.3	9.1	29.25	25.13	.750	10.00	1.125	19.01
24X13X .750/ .875T	99.89	143.7	263.9	2335.4	8.7	16.2	8.8	29.38	24.88	.750	13.00	.875	18.82
21X14X .688/1.125T	102.65	115.7	275.9	1821.9	7.6	15.7	6.6	30.19	22.13	.688	14.00	1.125	15.38
21X15X .688/1.125T	106.45	116.7	291.0	1861.6	7.5	16.0	6.4	31.31	22.13	.688	15.00	1.125	15.38
24X12X .750/1.125T	107.10	148.7	294.0	2503.1	8.7	16.8	8.5	31.50	25.13	.750	12.00	1.125	19.01
24X13X .750/1.125T	110.94	150.4	311.8	2571.9	8.7	17.1	8.2	32.63	25.13	.750	13.00	1.125	19.01
27X 9X .875/1.500T	126.24	201.7	348.9	3670.4	9.8	18.2	10.5	37.13	28.50	.875	9.00	1.500	25.13
27X10X .875/1.375T	127.09	201.6	355.1	3677.2	9.7	18.2	10.4	37.38	28.38	.875	10.00	1.375	25.02
27X13X .875/1.125T	130.05	202.2	374.6	3722.3	9.7	18.4	9.9	38.25	28.13	.875	13.00	1.125	24.81
27X10X .875/1.500T	131.34	205.2	375.0	3808.4	9.7	18.6	10.2	38.63	28.50	.875	10.00	1.500	25.13
27X11X .875/1.375T	131.75	204.7	379.2	3801.5	9.7	18.6	10.0	38.75	28.38	.875	11.00	1.375	25.02
27X14X .875/1.125T	133.89	204.5	394.6	3818.6	9.7	18.7	9.7	39.38	28.13	.875	14.00	1.125	24.81
27X15X .875/1.125T	137.70	206.7	414.3	3909.4	9.7	18.9	9.4	40.50	28.13	.875	15.00	1.125	24.81
27X13X .875/1.500T	146.64	213.5	452.6	4166.8	9.7	19.5	9.2	43.13	28.50	.875	13.00	1.500	25.13
30X10X1.000/1.375T	148.75	263.0	424.5	5130.3	10.7	19.5	12.1	43.75	31.38	1.000	10.00	1.375	31.60
30X10X1.000/1.500T	153.00	267.7	447.0	5310.3	10.7	19.8	11.9	45.00	31.50	1.000	10.00	1.500	31.72
30X11X1.000/1.375T	153.44	267.2	451.5	5304.5	10.7	19.9	11.7	45.13	31.38	1.000	11.00	1.375	31.60
30X10X1.000/1.750T	161.50	276.3	490.9	5652.3	10.7	20.5	11.5	47.50	31.75	1.000	10.00	1.750	31.97

0.2188 - 7/32 in.

NOMINAL SIZE			SECTION MODULUS			BEAM DIMENSIONS			FLANGE			SHEAR AREA		
WT/FT			ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
3X 2X	125/	188T	2.55	4.8	1.5	4.0	1.2	.8	2.6	3.19	.125	2.00	.188	.43
4X 2X	125/	188T	2.99	6.5	2.1	7.1	1.6	1.1	3.3	4.19	.125	2.00	.188	.56
3X 2X	188/	250T	3.68	5.0	2.0	5.0	1.3	1.0	2.5	3.25	.188	2.00	.250	.66
3X 2X	188/	313T	4.05	5.2	2.3	5.7	1.4	1.0	2.5	3.31	.188	2.00	.313	.67
3X 3X	188/	250T	4.45	5.4	2.7	6.3	1.4	1.2	2.3	3.25	.188	3.00	.250	.66
4X 2X	188/	313T	4.69	7.1	3.3	10.3	1.8	1.4	3.1	4.31	.188	2.00	.313	.86
5X 2X	188/	250T	4.90	8.7	3.7	14.4	2.1	1.7	3.8	5.25	.188	2.00	.250	1.03
5X 2X	188/	313T	5.30	9.0	4.3	16.2	2.2	1.8	3.6	5.31	.188	2.00	.313	1.05
6X 2X	188/	313T	5.95	10.9	5.4	23.8	2.6	2.2	4.4	6.31	.188	2.00	.313	1.23
6X 3X	188/	250T	6.39	11.1	6.2	25.8	2.6	2.3	4.2	6.25	.188	3.00	.250	1.22
4X 4X	188/	313T	6.80	7.8	5.5	14.9	2.0	1.9	2.6	4.31	.188	4.00	.313	.86
6X 3X	188/	313T	7.00	11.5	7.1	28.9	2.7	2.5	4.1	6.31	.188	3.00	.313	1.23
6X 4X	188/	313T	7.45	9.6	7.2	23.1	2.4	2.4	3.2	5.31	.188	4.00	.313	1.05
6X 4X	188/	313T	8.09	11.9	8.9	33.3	2.8	2.8	3.8	6.31	.188	4.00	.313	1.23
7X 3X	250/	438T	8.70	10.2	7.7	24.9	2.4	2.4	3.2	5.44	.250	3.00	.438	1.42
7X 3X	250/	313T	9.15	13.9	9.2	41.9	3.0	3.0	4.5	7.31	.250	3.00	.313	1.89
6X 3X	250/	438T	9.55	12.4	9.5	35.9	2.8	2.9	3.8	6.44	.250	3.00	.438	1.67
8X 3X	250/	375T	9.79	14.3	10.3	45.6	3.1	3.2	4.4	7.38	.250	3.00	.375	1.91
8X 3X	250/	313T	10.00	16.1	10.9	55.8	3.4	3.5	5.1	8.31	.250	3.00	.313	2.14
7X 4X	250/	313T	10.20	14.4	11.1	47.5	3.1	3.3	4.3	7.31	.250	4.00	.313	1.89
7X 3X	250/	438T	10.40	14.6	11.3	49.1	3.2	3.4	4.3	7.44	.250	3.00	.438	1.92
8X 3X	250/	375T	10.64	16.6	12.2	60.5	3.5	3.6	5.0	8.38	.250	3.00	.375	2.16
8X 4X	250/	313T	11.05	16.8	13.1	63.0	3.5	3.8	4.8	8.31	.250	4.00	.313	2.14
8X 3X	250/	438T	11.25	17.0	13.4	65.0	3.5	3.8	4.9	8.44	.250	3.00	.438	2.17
6X 5X	250/	375T	11.49	12.8	12.5	41.9	2.8	3.3	3.4	6.38	.250	5.00	.375	1.66
8X 4X	250/	375T	11.90	17.2	14.7	68.4	3.6	4.0	4.7	8.38	.250	4.00	.375	2.16
7X 5X	250/	375T	12.34	15.2	14.9	57.4	3.2	3.8	3.9	7.38	.250	5.00	.375	1.91
6X 5X	250/	438T	12.55	13.1	14.0	45.3	2.9	3.5	3.2	6.44	.250	5.00	.438	1.67
8X 4X	250/	438T	12.75	17.6	16.4	73.7	3.6	4.2	4.5	8.44	.250	4.00	.438	2.17</

219



.250 IN. PLATE (AREA= 1.88 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				INERTIA		R	YP	YF	AREA		DEPTH		WEB		FLANGE		SHEAR AREA
		WT/FT	ZPL	ZFL	INERTIA	ZPL	ZFL				THICK	THICK	THICK	THICK	THICK	THICK	WIDTH	THICK	
10X 4X	.313/.563T	18.29	24.7	26.2	137.4	24.7	26.2	4.4	5.6	5.2	5.38	10.56	5.38	10.56	.313	.313	4.00	.563	3.38
9X 6X	.313/.438T	18.50	22.0	26.1	115.8	22.0	26.1	4.0	5.3	4.4	5.44	9.44	5.44	9.44	.313	.313	6.00	.438	3.03
10X 5X	.313/.500T	19.14	24.9	28.3	142.6	24.9	28.3	4.4	5.7	5.0	5.63	10.50	5.63	10.50	.313	.313	5.00	.500	3.36
7X 7X	.313/.500T	19.35	16.9	24.5	77.6	16.9	24.5	3.2	4.6	3.2	5.69	7.50	5.69	7.50	.313	.313	7.00	.500	2.43
10X 6X	.313/.438T	19.55	25.0	29.5	144.5	25.0	29.5	4.4	5.8	4.9	5.75	10.44	5.75	10.44	.313	.313	6.00	.438	3.35
9X 6X	.313/.500T	19.75	22.4	28.7	122.8	22.4	28.7	4.0	5.5	4.3	5.81	9.50	5.81	9.50	.313	.313	6.00	.500	3.05
10X 5X	.313/.563T	20.20	25.4	30.7	150.3	25.4	30.7	4.4	5.9	4.9	5.94	10.56	5.94	10.56	.313	.313	5.00	.563	3.38
7X 7X	.313/.563T	20.84	17.2	26.8	81.8	17.2	26.8	3.2	4.8	3.0	6.13	7.55	6.13	7.55	.313	.313	7.00	.563	2.44
10X 6X	.313/.500T	20.84	25.5	32.4	153.3	25.5	32.4	4.4	6.0	4.7	6.13	10.50	6.13	10.50	.313	.313	6.00	.500	3.36
9X 7X	.313/.500T	21.45	22.8	32.3	130.3	22.8	32.3	4.0	5.7	4.0	6.31	9.50	6.31	9.50	.313	.313	7.00	.500	3.05
12X 4X	.375/.469T	21.69	31.4	30.6	197.2	31.4	30.6	4.9	6.3	6.4	6.38	12.47	6.4	6.38	.375	.375	4.00	.469	4.77
8X 7X	.313/.563T	21.90	20.1	31.1	107.6	20.1	31.1	3.6	5.3	3.5	6.44	8.56	6.44	8.56	.313	.313	7.00	.563	2.76
10X 6X	.313/.563T	22.10	25.9	35.2	161.4	25.9	35.2	4.4	6.2	4.6	6.50	10.56	6.50	10.56	.313	.313	6.00	.563	3.18
10X 7X	.313/.500T	22.54	25.9	36.4	162.7	25.9	36.4	4.4	6.3	4.5	6.63	10.50	6.63	10.50	.313	.313	7.00	.500	3.36
12X 4X	.375/.531T	22.54	32.1	32.9	207.4	32.1	32.9	4.9	6.5	6.3	6.63	12.53	6.3	6.63	.375	.375	4.00	.531	4.79
12X 5X	.375/.469T	23.26	32.4	35.1	214.4	32.4	35.1	5.0	6.6	6.1	6.84	12.47	6.1	6.84	.375	.375	5.00	.469	4.77
12X 4X	.375/.594T	23.39	32.7	35.1	217.3	32.7	35.1	5.0	6.7	6.2	6.88	12.59	6.2	6.88	.375	.375	4.00	.594	4.82
7X 7X	.375/.625T	23.80	18.1	29.2	88.0	18.1	29.2	3.1	4.9	3.0	7.00	7.63	3.0	7.00	.375	.375	7.00	.625	2.96
10X 7X	.313/.563T	24.00	26.3	39.7	171.1	26.3	39.7	4.4	6.5	4.3	7.06	10.56	4.3	7.06	.313	.313	7.00	.563	3.38
12X 4X	.375/.656T	24.24	33.2	37.2	226.6	33.2	37.2	5.0	6.8	6.1	7.13	12.66	6.1	7.13	.375	.375	5.00	.656	4.84
12X 5X	.375/.531T	24.34	33.1	37.9	225.8	33.1	37.9	5.0	6.8	6.0	7.16	12.53	6.0	7.16	.375	.375	5.00	.531	4.79
9X 8X	.313/.563T	24.85	23.4	39.3	144.1	23.4	39.3	4.0	6.1	3.7	7.31	9.56	3.7	7.31	.313	.313	8.00	.563	3.87
12X 6X	.375/.469T	24.85	33.3	39.5	229.8	33.3	39.5	5.0	6.9	5.8	7.31	12.47	5.8	7.31	.375	.375	6.00	.469	4.77
12X 5X	.375/.594T	24.85	33.7	40.6	236.5	33.7	40.6	5.0	7.0	5.8	7.47	12.59	5.8	7.47	.375	.375	5.00	.594	4.82
10X 8X	.313/.563T	25.94	26.7	44.2	179.9	26.7	44.2	4.4	6.7	4.1	7.63	10.56	4.1	7.63	.313	.313	8.00	.563	3.38
12X 6X	.375/.531T	26.15	33.9	42.9	242.1	33.9	42.9	5.0	7.1	5.6	7.69	12.53	5.6	7.69	.375	.375	6.00	.531	4.79
12X 5X	.375/.656T	26.45	34.2	43.3	247.0	34.2	43.3	5.1	7.2	5.7	7.78	12.66	5.7	7.78	.375	.375	5.00	.656	4.84
12X 7X	.375/.469T	26.45	33.9	44.0	243.6	33.9	44.0	5.0	7.2	5.5	7.78	12.47	5.5	7.78	.375	.375	7.00	.469	4.77
7X 7X	.438/.686T	26.79	19.1	31.6	94.4	19.1	31.6	3.1	5.0	3.0	7.88	7.69	3.0	7.88	.438	.438	7.00	.686	3.48
12X 6X	.375/.594T	27.40	34.5	46.2	253.5	34.5	46.2	5.1	7.3	5.5	8.06	12.59	5.5	8.06	.375	.375	6.00	.594	4.82
12X 7X	.375/.531T	27.95	34.6	47.9	256.7	34.6	47.9	5.0	7.4	5.4	8.22	12.53	5.4	8.22	.375	.375	7.00	.531	4.79
7X 7X	.438/.750T	28.25	19.3	33.7	98.3	19.3	33.7	3.1	5.1	2.9	8.31	7.75	2.9	8.31	.438	.438	7.00	.750	3.50
12X 6X	.375/.656T	28.70	35.0	49.4	264.6	35.0	49.4	5.1	7.6	5.4	8.44	12.66	5.4	8.44	.375	.375	6.00	.656	4.84
12X 7X	.375/.594T	29.44	35.2	51.7	268.7	35.2	51.7	5.1	7.6	5.2	8.66	12.59	5.2	8.66	.375	.375	7.00	.594	4.82
14X 5X	.438/.531T	29.85	42.5	47.7	332.3	42.5	47.7	5.6	7.8	7.0	8.78	14.53	7.0	8.78	.438	.438	5.00	.531	6.47
14X 5X	.438/.594T	30.91	43.4	50.8	347.0	43.4	50.8	5.6	8.0	6.8	9.09	14.59	6.8	9.09	.438	.438	5.00	.594	5.50
12X 8X	.375/.656T	30.91	35.7	55.5	280.2	35.7	55.5	5.1	7.9	5.1	9.09	12.66	5.1	9.09	.375	.375	8.00	.656	4.84
12X 6X	.375/.594T	31.45	35.7	57.2	282.2	35.7	57.2	5.0	7.9	4.9	9.25	12.59	4.9	9.25	.375	.375	8.00	.594	4.82
14X 6X	.438/.531T	31.65	43.7	53.4	355.1	43.7	53.4	5.6	8.1	6.7	9.31	14.53	6.7	9.31	.438	.438	6.00	.531	6.47
14X 5X	.438/.656T	31.99	44.1	53.9	361.6	44.1	53.9	5.7	8.2	6.7	9.41	14.66	6.7	9.41	.438	.438	5.00	.656	6.53
7X 7X	.500/.875T	32.74	20.6	37.7	108.3	20.6	37.7	3.1	5.3	2.9	9.63	7.88	2.9	9.63	.500	.500	7.00	.875	4.07
14X 6X	.438/.594T	32.95	44.5	57.1	371.1	44.5	57.1	5.7	8.3	6.5	9.69	14.59	6.5	9.69	.438	.438	6.00	.594	6.50
14X 5X	.438/.719T	33.05	44.8	56.9	375.3	44.8	56.9	5.7	8.4	6.6	9.72	14.72	6.6	9.72	.438	.438	5.00	.719	6.56
12X 8X	.375/.656T	33.15	36.2	61.4	294.2	36.2	61.4	5.0	8.1	4.8	9.75	12.66	4.8	9.75	.375	.375	8.00	.656	4.84
7X 6X	.563/1.000T	33.80	21.5	36.9	112.3	21.5	36.9	3.1	5.2	3.0	9.94	8.00	3.0	9.94	.563	.563	6.00	1.000	4.64

0.2500 - 1/4 in.

.250 IN. PLATE (AREA= 1.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		DIMENSIONS				BEAM		FLANGE		SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA	
14X 6X .438/ .656T	34.20	45.2	60.8	5.7	8.5	6.4	10.06	14.66	.438	6.00	.656	6.53	
14X 7X .438/ .594T	34.95	45.5	63.4	5.7	8.6	6.2	10.28	14.59	.438	7.00	.594	6.50	
12X 9X .375/ .656T	35.39	36.7	306.5	5.0	8.4	4.6	10.41	12.66	.375	9.00	.656	4.84	
14X 6X .438/ .719T	35.50	45.9	64.5	5.7	8.7	6.2	10.44	14.72	.438	6.00	.719	6.56	
14X 7X .438/ .656T	36.45	46.2	67.7	5.7	8.9	6.8	10.72	14.66	.438	7.00	.656	6.53	
14X 8X .438/ .594T	36.99	46.3	69.8	5.7	8.9	5.9	10.88	14.59	.438	8.00	.594	6.50	
7X 7X .563/1.000T	37.20	21.9	41.6	3.0	5.4	2.8	10.94	8.80	.563	7.00	1.000	4.64	
16X 5X .500/ .594T	37.30	54.8	62.7	6.2	9.0	7.9	10.97	16.59	.500	5.00	.594	8.42	
14X 7X .438/ .719T	37.94	46.9	72.0	5.7	9.1	5.9	11.16	14.72	.438	7.00	.719	6.56	
16X 5X .500/ .656T	38.35	55.7	66.0	6.2	9.2	7.7	11.28	16.66	.500	5.00	.656	8.46	
14X 8X .438/ .656T	38.69	47.0	74.5	5.7	9.1	5.8	11.38	14.66	.438	8.00	.656	6.53	
16X 6X .500/ .594T	39.30	56.3	69.8	6.2	9.3	7.5	11.56	16.59	.500	6.00	.594	8.42	
16X 5X .500/ .719T	39.41	56.6	69.5	6.3	9.3	7.6	11.59	16.72	.500	5.00	.719	8.49	
12X 9X .438/ .719T	39.85	39.2	72.8	4.9	8.4	4.5	11.72	12.72	.438	9.00	.719	5.68	
14X 8X .438/ .719T	40.39	47.7	79.4	5.7	9.4	5.6	11.88	14.72	.438	8.00	.719	6.56	
16X 6X .500/ .656T	40.60	57.3	73.9	6.3	9.5	7.4	11.94	16.66	.500	6.00	.656	8.46	
16X 7X .500/ .594T	41.34	57.6	76.8	6.3	9.6	7.2	12.16	16.59	.500	7.00	.594	8.42	
7X 7X .625/1.125T	41.65	23.2	45.1	3.0	5.5	2.8	12.25	8.13	.625	7.00	1.125	5.24	
16X 6X .500/ .719T	41.85	58.2	78.0	6.3	9.7	7.3	12.31	16.72	.500	6.00	.719	8.49	
16X 5X .500/ .875T	42.09	58.7	77.9	6.3	9.8	7.4	12.38	16.88	.500	5.00	.875	8.57	
12X 10X .438/ .719T	42.30	39.6	79.2	4.9	8.6	4.3	12.44	12.72	.438	10.00	.719	5.68	
16X 7X .500/ .656T	42.81	58.6	81.6	6.3	9.8	7.1	12.59	16.66	.500	7.00	.656	8.46	
14X 9X .438/ .719T	42.81	48.3	86.8	5.7	9.6	5.4	12.59	14.72	.438	9.00	.719	6.56	
16X 7X .500/ .719T	44.30	59.5	86.4	6.3	10.1	6.9	13.03	16.72	.500	7.00	.719	8.49	
16X 6X .500/ .875T	45.05	60.2	88.0	6.4	10.2	7.0	13.25	16.88	.500	6.00	.875	8.57	
16X 8X .500/ .656T	45.05	59.7	89.3	6.3	10.1	6.8	13.25	16.66	.500	8.00	.656	8.46	
14X 10X .438/ .719T	45.25	48.9	94.1	5.6	9.9	5.1	13.31	14.72	.438	10.00	.719	6.56	
7X 7X .688/1.250T	46.50	24.6	48.6	3.0	5.6	2.9	13.56	8.25	.688	7.00	1.250	5.85	
16X 8X .500/ .719T	46.75	60.6	94.9	6.3	10.4	6.6	13.75	16.72	.500	8.00	.719	8.49	
16X 9X .500/ .656T	47.29	60.7	97.1	6.3	10.4	6.5	13.91	16.66	.500	9.00	.656	8.46	
16X 6X .563/ .656T	47.80	61.4	88.7	6.9	10.5	8.4	14.06	18.66	.563	6.00	.656	10.65	
16X 7X .500/ .875T	48.04	61.5	98.2	6.4	10.5	6.6	14.13	16.88	.500	7.00	.875	8.57	
18X 6X .563/ .719T	49.10	72.5	93.4	6.9	10.7	8.3	14.44	18.72	.563	6.00	.719	10.68	
16X 9X .500/ .719T	49.20	61.6	103.2	6.3	10.6	6.3	14.47	16.72	.500	9.00	.719	8.49	
16X 8X .500/ .875T	51.00	62.6	108.2	6.3	10.8	6.3	15.00	16.88	.500	8.00	.875	8.57	
18X 7X .563/ .719T	51.54	74.3	102.8	6.9	11.0	8.0	15.16	18.72	.563	7.00	.719	10.68	
16X 10X .500/ .719T	51.65	62.4	111.6	6.3	10.9	6.1	15.19	16.72	.500	10.00	.719	8.49	
18X 8X .563/ .656T	52.29	74.6	106.0	6.9	11.1	7.8	15.38	18.66	.563	8.00	.656	10.65	
14X 10X .500/ .875T	53.55	53.3	109.6	54.23	5.5	4.9	15.75	14.88	.500	10.00	.875	7.57	
16X 9X .500/ .875T	53.99	63.6	118.2	6.3	11.1	6.0	15.88	16.88	.500	9.00	.875	8.57	
18X 8X .563/ .719T	53.99	75.8	112.1	857.6	6.9	7.7	15.88	18.72	.563	8.00	.719	10.68	
18X 9X .563/ .656T	54.50	75.9	114.6	863.2	6.9	7.5	16.03	18.66	.563	9.00	.656	10.65	
18X 6X .563/1.000T	54.84	77.0	113.4	882.9	7.0	7.8	16.13	19.00	.563	6.00	1.000	10.84	
18X 7X .563/ .875T	55.25	76.9	115.9	884.2	7.0	7.6	16.25	18.88	.563	7.00	.875	10.77	
7X 7X .625/1.125T	56.41	23.2	45.1	3.0	5.5	2.8	12.25	8.13	.625	7.00	1.125	5.24	
16X 6X .500/ .719T	56.41	58.2	78.0	6.3	9.7	7.3	12.31	16.72	.500	6.00	.719	8.49	
16X 5X .500/ .875T	56.41	58.7	77.9	6.3	9.8	7.4	12.38	16.88	.500	5.00	.875	8.57	
12X 10X .438/ .719T	56.41	39.6	79.2	4.9	8.6	4.3	12.44	12.72	.438	10.00	.719	5.68	
16X 7X .500/ .656T	56.41	58.6	81.6	6.3	9.8	7.1	12.59	16.66	.500	7.00	.656	8.46	
14X 9X .438/ .719T	56.41	48.3	86.8	5.7	9.6	5.4	12.59	14.72	.438	9.00	.719	6.56	
16X 7X .500/ .719T	56.41	59.5	86.4	6.3	10.1	6.9	13.03	16.72	.500	7.00	.719	8.49	
16X 6X .500/ .875T	56.41	60.2	88.0	6.4	10.2	7.0	13.25	16.88	.500	6.00	.875	8.57	
16X 8X .500/ .656T	56.41	59.7	89.3	6.3	10.1	6.8	13.25	16.66	.500	8.00	.656	8.46	
14X 10X .438/ .719T	56.41	48.9	94.1	5.6	9.9	5.1	13.31	14.72	.438	10.00	.719	6.56	
7X 7X .688/1.250T	56.41	24.6	48.6	3.0	5.6	2.9	13.56	8.25	.688	7.00	1.250	5.85	
16X 8X .500/ .719T	56.41	60.6	94.9	6.3	10.4	6.6	13.75	16.72	.500	8.00	.719	8.49	
16X 9X .500/ .656T	56.41	60.7	97.1	6.3	10.4	6.5	13.91	16.66	.500	9.00	.656	8.46	
16X 6X .563/ .656T	56.41	61.4	88.7	6.9	10.5	8.4	14.06	18.66	.563	6.00	.656	10.65	
16X 7X .500/ .875T	56.41	61.5	98.2	6.4	10.5	6.6	14.13	16.88	.500	7.00	.875	8.57	
18X 6X .563/ .719T	56.41	72.5	93.4	6.9	10.7	8.3	14.44	18.72	.563	6.00	.719	10.68	
16X 9X .500/ .719T	56.41	61.6	103.2	6.3	10.6	6.3	14.47	16.72	.500	9.00	.719	8.49	
16X 8X .500/ .875T	56.41	62.6	108.2	6.3	10.8	6.3	15.00	16.88	.500	8.00	.875	8.57	
18X 7X .563/ .719T	56.41	74.3	102.8	6.9	11.0	8.0	15.16	18.72	.563	7.00	.719	10.68	
16X 10X .500/ .719T	56.41	62.4	111.6	6.3	10.9	6.1	15.19	16.72	.500	10.00	.719	8.49	
18X 8X .563/ .656T	56.41	74.6	106.0	6.9	11.1	7.8	15.38	18.66	.563	8.00	.656	10.65	
14X 10X .500/ .875T	56.41	53.3	109.6	54.23	5.5	4.9	15.75	14.88	.500	10.00	.875	7.57	
16X 9X .500/ .875T	56.41	63.6	118.2	6.3	11.1	6.0	15.88	16.88	.500	9.00	.875	8.57	
18X 8X .563/ .719T	56.41	75.8	112.1	857.6	6.9	7.7	15.88	18.72	.563	8.00	.719	10.68	
18X 9X .563/ .656T	56.41	75.9	114.6	863.2	6.9	7.5	16.03	18.66	.563	9.00	.656	10.65	
18X 6X .563/1.000T	56.41	77.0	113.4	882.9	7.0	7.8	16.13	19.00	.563	6.00	1.000	10.84	
18X 7X .563/ .875T	56.41	76.9	115.9	884.2	7.0	7.6	16.25	18.88	.563	7.00	.875	10.77	
7X 7X .625/1.125T	56.41	23.2	45.1	3.0	5.5	2.8	12.25	8.13	.625	7.00	1.125	5.24	
16X 6X .500/ .719T	56.41	58.2	78.0	6.3	9.7	7.3	12.31	16.72	.500	6.00	.719	8.49	
16X 5X .500/ .875T	56.41	58.7	77.9	6.3	9.8	7.4	12.38	16.88	.500	5.00	.875	8.57	
12X 10X .438/ .719T	56.41	39.6	79.2	4.9	8.6	4.3	12.44	12.72	.438	10.00	.719	5.68	
16X 7X .500/ .656T	56.41	58.6	81.6	6.3	9.8	7.1	12.59	16.66	.500	7.00	.656	8.46	
14X 9X .438/ .719T	56.41	48.3	86.8	5.7	9.6	5.4	12.59	14.72	.438	9.00	.719	6.56	
16X 7X .500/ .719T	56.41	59.5	86.4	6.3	10.1	6.9	13.03	16.72	.500	7.00	.719	8.49	
16X 6X .500/ .875T	56.41	60.2	88.0	6.4	10.2	7.0	13.25	16.88	.500	6.00	.875	8.57	
16X 8X .500/ .656T	56.41	59.7	89.3	6.3	10.1	6.8	13.25	16.66	.500	8.00	.656	8.46	
14X 10X .438/ .719T	56.41	48.9	94.1	5.6	9.9	5.1	13.31	14.72	.438	10.00	.719	6.56	
7X 7X .688/1.250T	56.41	24.6	48.6	3.0	5.6	2.9	13.56	8.25	.688	7.00	1.250	5.85	
16X 8X .500/ .719T	56.41	60.6	94.9	6.3	10.4	6.6	13.75	16.72	.500	8.00	.719	8.49	
16X 9X .500/ .656T	56.41	60.7	97.1	6.3	10.4	6.5	13.91	16.66	.500	9.00	.656	8.46	
16X 6X .563/ .656T	56.41	61.4	88.7	6.9	10.5	8.4	14.06	18.66	.563	6.00	.656	10.65	
16X 7X .500/ .875T	56.41	61.5	98.2	6.4	10.5	6.6	14.13	16.88	.500	7.00	.875	8.57	
18X 6X .563/ .719T	56.41	72.5	93.4	6.9	10.7	8.3	14.44	18.72	.563	6.00	.719	10.68	
16X 9X .500/ .719T	56.41	61.6	103.2	6.3	10.6	6.3	14.47	16.72	.500	9.00	.719	8.49	
16X 8X .500/ .875T	56.41	62.6	108.2	6.3	10.8	6.3	15.00	16.88	.500	8.00	.875	8.57	
18X 7X .563/ .719T	56.41	74.3	102.8	6.9	11.0	8.0	15.16	18.72	.563	7.00	.719	10.68	
16X 10X .500/ .719T	56.41	62.4	111.6	6.3	10.9	6.1	15.19	16.72	.500	10.00	.719	8.49	
18X 8X .563/ .656T	56.41	74.6	106.0	6.9	11.1	7.8	15.38	18.66	.563	8.00	.656	10.65	
14X 10X .500/ .875T	56												



.250 IN. PLATE (AREA= 1.00 SQ.IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	THICK	AREA	THICK	AREA	THICK	AREA	THICK		
16X10X .500/.875T	56.95	64.4	128.0	733.7	6.3	11.4	5.7	16.75	16.88	.500	10.00	.875	.500	8.57	.875	8.57	.875	8.57	.875		
18X10X .563/.719T	58.85	78.2	130.7	928.5	7.0	11.9	7.1	17.31	18.72	.563	10.00	.719	.563	10.68	.719	10.68	.719	10.68	.719		
18X 8X .563/1.000T	61.64	80.3	138.7	978.7	7.0	12.2	7.1	18.13	19.80	.563	8.00	1.000	.563	10.84	1.000	10.84	1.000	10.84	1.000		
18X11X .563/.875T	67.15	81.8	160.1	1036.1	6.9	12.7	6.5	19.75	18.00	.563	11.00	.875	.563	10.77	.875	10.77	.875	10.77	.875		
18X10X .563/1.000T	58.44	82.6	163.6	1057.1	6.9	12.8	6.5	20.13	19.00	.563	10.00	1.000	.563	10.84	1.000	10.84	1.000	10.84	1.000		
18X12X .563/.875T	70.14	82.7	170.9	1066.4	6.9	12.9	6.2	20.63	18.00	.563	12.00	.875	.563	10.77	.875	10.77	.875	10.77	.875		
18X 9X .625/1.125T	72.69	87.8	166.2	1113.5	6.9	12.7	6.7	21.38	19.13	.625	9.00	1.125	.625	12.11	1.125	12.11	1.125	12.11	1.125		
21X 9X .688/.875T	75.85	111.5	174.0	1503.6	7.9	13.5	8.6	22.31	21.88	.688	9.00	.875	.688	15.23	.875	15.23	.875	15.23	.875		
21X10X .688/.875T	78.85	113.3	186.8	1560.6	7.9	13.8	8.4	23.19	21.88	.688	10.00	.875	.688	15.23	.875	15.23	.875	15.23	.875		
21X 8X .688/1.125T	79.70	114.7	188.0	1594.2	7.9	13.9	8.5	23.44	22.13	.688	8.00	1.125	.688	15.40	1.125	15.40	1.125	15.40	1.125		
21X11X .688/.875T	81.80	114.9	199.6	1613.6	7.9	14.0	8.1	24.06	21.88	.688	11.00	.875	.688	15.23	.875	15.23	.875	15.23	.875		
21X 9X .688/1.125T	83.50	116.7	204.0	1661.7	7.9	14.2	8.1	24.56	22.13	.688	9.00	1.125	.688	15.40	1.125	15.40	1.125	15.40	1.125		
21X12X .688/.875T	84.80	116.4	212.3	1663.3	7.9	14.3	7.8	24.94	21.88	.688	12.00	.875	.688	15.23	.875	15.23	.875	15.23	.875		
21X10X .688/1.125T	87.35	118.6	219.8	1723.5	7.9	14.5	7.8	25.69	22.13	.688	10.00	1.125	.688	15.40	1.125	15.40	1.125	15.40	1.125		
21X13X .688/.875T	87.75	117.7	224.7	1709.4	7.9	14.5	7.6	25.81	21.88	.688	13.00	.875	.688	15.23	.875	15.23	.875	15.23	.875		
24X10X .750/.875T	90.95	146.5	226.4	2235.0	8.8	15.3	9.9	26.75	24.88	.750	10.00	.875	.750	18.85	.875	18.85	.875	18.85	.875		
24X 8X .750/1.125T	91.80	148.1	227.9	2278.5	8.9	15.4	10.0	27.00	25.13	.750	8.00	1.125	.750	19.04	1.125	19.04	1.125	19.04	1.125		
24X11X .750/.875T	93.94	148.7	240.8	2310.2	8.8	15.5	9.6	27.63	24.88	.750	11.00	.875	.750	18.85	.875	18.85	.875	18.85	.875		
24X 9X .750/1.125T	95.64	151.0	246.1	2374.7	8.9	15.7	9.7	28.13	25.13	.750	9.00	1.125	.750	19.04	1.125	19.04	1.125	19.04	1.125		
24X12X .750/.875T	96.90	150.7	255.2	2381.4	8.9	15.8	9.3	28.50	24.88	.750	12.00	.875	.750	18.85	.875	18.85	.875	18.85	.875		
24X10X .750/1.125T	99.45	153.5	264.4	2464.3	8.9	16.1	9.3	29.25	25.13	.750	10.00	1.125	.750	19.04	1.125	19.04	1.125	19.04	1.125		
24X13X .750/.875T	99.89	152.6	269.8	2449.1	8.9	16.1	9.1	29.38	24.88	.750	13.00	.875	.750	18.85	.875	18.85	.875	18.85	.875		
21X14X .688/1.125T	182.65	123.9	282.8	1928.6	7.8	15.6	6.8	30.19	22.13	.688	14.00	1.125	.688	15.40	1.125	15.40	1.125	15.40	1.125		
21X15X .688/1.125T	186.45	125.0	298.3	1971.2	7.7	15.8	6.6	31.31	22.13	.688	15.00	1.125	.688	15.40	1.125	15.40	1.125	15.40	1.125		
24X12X .750/1.125T	107.10	157.7	300.6	2625.2	8.9	16.6	8.7	31.50	25.13	.750	12.00	1.125	.750	19.04	1.125	19.04	1.125	19.04	1.125		
24X13X .750/1.125T	110.94	159.5	318.7	2698.0	8.8	16.9	8.5	32.63	25.13	.750	13.00	1.125	.750	19.04	1.125	19.04	1.125	19.04	1.125		
27X 9X .875/1.500T	126.24	211.5	355.6	3813.4	9.9	18.0	10.7	37.13	28.50	.875	9.00	1.500	.875	25.16	1.500	25.16	1.500	25.16	1.500		
27X10X .875/1.375T	127.09	211.5	361.8	3820.9	9.9	18.1	10.6	37.38	28.38	.875	10.00	1.375	.875	25.05	1.375	25.05	1.375	25.05	1.375		
27X13X .875/1.125T	130.05	212.1	381.6	3888.7	9.8	18.2	10.1	38.25	28.13	.875	13.00	1.125	.875	24.83	1.125	24.83	1.125	24.83	1.125		
27X10X .875/1.500T	131.34	215.1	382.1	3957.2	9.9	18.4	10.4	38.63	28.50	.875	10.00	1.500	.875	25.16	1.500	25.16	1.500	25.16	1.500		
27X11X .875/1.375T	131.75	214.6	386.4	3958.6	9.9	18.4	10.2	38.75	28.38	.875	11.00	1.375	.875	25.05	1.375	25.05	1.375	25.05	1.375		
27X14X .875/1.125T	133.89	214.5	401.9	3969.3	9.8	18.5	9.9	39.38	28.13	.875	14.00	1.125	.875	24.83	1.125	24.83	1.125	24.83	1.125		
27X15X .875/1.125T	137.70	216.8	421.9	4064.0	9.8	18.7	9.6	40.50	28.13	.875	15.00	1.125	.875	24.83	1.125	24.83	1.125	24.83	1.125		
27X13X .875/1.500T	146.64	223.8	461.0	4331.5	9.8	19.4	9.4	43.13	28.50	.875	13.00	1.500	.875	25.16	1.500	25.16	1.500	25.16	1.500		
30X10X1.000/1.375T	148.75	273.6	431.4	5295.6	10.8	19.4	12.3	43.75	31.38	1.000	10.00	1.375	1.000	31.63	1.375	31.63	1.375	31.63	1.375		
30X10X1.000/1.500T	153.00	278.4	454.3	5480.7	10.8	19.7	12.1	45.00	31.50	1.000	10.00	1.500	1.000	31.75	1.500	31.75	1.500	31.75	1.500		
30X11X1.000/1.375T	153.44	278.0	458.8	5475.1	10.8	19.7	11.9	45.13	31.38	1.000	11.00	1.375	1.000	31.63	1.375	31.63	1.375	31.63	1.375		
30X10X1.000/1.750T	161.50	287.3	498.7	5833.5	10.9	20.3	11.7	47.50	31.75	1.000	10.00	1.750	1.000	32.00	1.750	32.00	1.750	32.00	1.750		

0.2500 - 1/4 in.

0.281 IN. PLATE (AREA= 2.37 SQ. IN.)

NOMINAL SIZE	SECTION MODULUS		R	YP	VF	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL	INERTIA	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK
3X 2X .125/ .100T	2.55	5.8	1.5	4.2	.75	3.19	.125	2.00	.100
4X 2X .125/ .100T	2.99	7.8	2.2	7.6	.88	4.19	.125	2.00	.100
3X 2X .100/ .250T	3.60	6.1	2.0	5.3	1.06	3.25	.100	2.00	.250
3X 2X .100/ .313T	4.05	6.3	2.4	6.2	1.19	3.31	.100	2.00	.313
3X 3X .100/ .250T	4.45	6.5	2.8	6.9	1.31	3.25	.100	3.00	.250
4X 2X .100/ .313T	4.69	8.6	3.4	11.1	1.31	4.31	.100	2.00	.313
5X 2X .100/ .250T	4.90	10.5	3.6	15.5	1.44	5.25	.100	2.00	.250
5X 2X .100/ .313T	5.30	10.9	4.4	17.5	1.56	5.31	.100	2.00	.313
6X 2X .100/ .250T	5.95	13.2	5.6	25.8	1.75	6.31	.100	2.00	.250
6X 3X .100/ .250T	6.39	13.5	6.3	28.0	1.88	6.25	.100	3.00	.250
4X 4X .100/ .313T	6.80	9.5	5.8	16.4	2.00	4.31	.100	4.00	.313
6X 3X .100/ .313T	7.00	13.9	7.3	31.6	2.06	6.31	.100	3.00	.313
5X 4X .100/ .313T	7.45	11.9	7.4	25.4	2.19	5.31	.100	4.00	.313
6X 4X .100/ .313T	8.09	14.4	9.1	36.7	2.38	6.31	.100	4.00	.313
5X 3X .250/ .438T	8.70	12.3	7.9	27.4	2.56	5.44	.250	3.00	.438
7X 3X .250/ .313T	9.15	16.6	9.5	45.8	2.69	7.31	.250	3.00	.313
6X 3X .250/ .438T	9.55	14.9	9.7	39.5	2.81	6.44	.250	3.00	.438
7X 3X .250/ .375T	9.79	17.1	10.6	50.1	2.88	7.38	.250	3.00	.375
8X 3X .250/ .313T	10.00	19.3	11.3	61.0	2.94	8.31	.250	3.00	.313
7X 4X .250/ .313T	10.20	17.3	11.4	52.2	3.00	7.31	.250	4.00	.313
7X 3X .250/ .438T	10.40	17.5	11.7	54.1	3.06	7.44	.250	3.00	.438
8X 3X .250/ .375T	10.64	19.8	12.5	66.4	3.13	8.38	.250	3.00	.375
8X 4X .250/ .313T	11.05	20.0	13.5	69.2	3.25	8.31	.250	4.00	.313
8X 3X .250/ .438T	11.25	20.3	13.8	71.5	3.31	8.44	.250	3.00	.438
6X 5X .250/ .375T	11.49	15.4	12.8	46.6	3.38	6.38	.250	5.00	.375
8X 4X .250/ .375T	11.90	20.5	15.1	75.5	3.50	8.38	.250	4.00	.375
7X 5X .250/ .375T	12.34	18.2	15.3	63.7	3.63	7.38	.250	5.00	.375
6X 5X .250/ .438T	12.55	15.8	14.4	50.7	3.69	6.44	.250	5.00	.438
8X 4X .250/ .438T	12.75	21.0	16.9	81.6	3.75	8.44	.250	4.00	.438
8X 5X .250/ .375T	13.19	21.1	17.9	83.8	3.88	8.38	.250	5.00	.375
7X 5X .250/ .438T	13.40	18.6	17.2	68.9	3.94	7.44	.250	5.00	.438
6X 6X .250/ .438T	14.04	16.0	16.8	55.0	4.13	6.44	.250	6.00	.438
8X 5X .250/ .438T	14.25	21.5	19.9	90.2	4.19	8.44	.250	5.00	.438
9X 4X .313/ .375T	14.65	24.1	18.4	100.7	4.31	9.38	.313	4.00	.375
7X 6X .250/ .438T	14.89	18.9	19.8	74.8	4.38	7.44	.250	6.00	.438
9X 4X .313/ .438T	15.50	24.6	20.2	108.0	4.44	9.44	.313	4.00	.438
10X 4X .313/ .375T	15.74	27.2	21.0	126.3	4.63	10.38	.313	4.00	.375
8X 6X .250/ .438T	15.74	21.9	22.9	97.8	4.63	8.44	.250	6.00	.438
9X 5X .313/ .375T	15.95	24.4	21.3	110.7	4.75	9.38	.313	5.00	.375
9X 4X .313/ .500T	16.35	25.2	22.0	114.9	4.81	9.50	.313	4.00	.500
10X 4X .313/ .438T	16.59	27.8	23.0	135.1	4.94	10.44	.313	4.00	.438
10X 5X .313/ .375T	17.00	28.0	24.3	138.5	5.00	10.38	.313	5.00	.375
9X 4X .313/ .563T	17.20	25.6	23.9	121.7	5.06	9.56	.313	4.00	.563
10X 4X .313/ .500T	17.44	28.4	25.1	143.6	5.13	10.50	.313	4.00	.500
10X 5X .313/ .438T	18.05	28.6	26.8	148.3	5.31	10.44	.313	5.00	.438

0.2813 - 9/32 in.



0.2813 in. PLATE (AREA= 2.37 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		YF		AREA		DEPTH		WEB		FLANGE		SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YF	AREA	DEPTH	THICK	WIDTH	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK
10X 4X .313/.563T	18.29	28.9	27.1	151.6	4.4	5.6	10.56	.313	4.00	.563	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39
9X 6X .313/.438T	18.50	25.9	27.0	120.5	4.1	5.0	9.44	.313	4.00	.438	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04	3.04
10X 5X .313/.500T	19.14	29.2	29.3	157.6	4.4	5.4	10.50	.313	5.00	.500	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37
7X 7X .313/.438T	19.35	20.1	25.3	87.2	3.3	3.4	7.50	.313	7.00	.500	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44
10X 6X .313/.438T	19.55	29.3	30.4	159.9	4.4	5.5	10.44	.313	6.00	.438	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.36
9X 6X .313/.500T	19.75	26.4	29.6	136.5	4.1	5.2	9.50	.313	6.00	.500	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
10X 5X .313/.563T	20.20	29.7	31.8	166.4	4.5	5.6	10.56	.313	5.00	.563	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39
7X 7X .313/.563T	20.84	20.4	27.7	92.2	3.3	3.3	7.56	.313	7.00	.563	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
10X 6X .313/.500T	20.94	29.8	33.5	170.1	4.5	5.7	10.50	.313	6.00	.500	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37
9X 7X .313/.500T	21.45	26.8	33.4	145.4	4.1	5.4	9.50	.313	7.00	.500	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
12X 4X .375/.469T	21.69	36.2	31.7	215.4	5.0	5.9	12.47	.375	4.00	.469	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
8X 7X .313/.563T	21.90	23.8	32.1	120.8	3.7	5.1	8.56	.313	7.00	.563	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77
10X 6X .313/.563T	22.10	30.3	36.4	179.4	4.5	5.9	10.56	.313	6.00	.563	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39
10X 7X .313/.500T	22.54	30.3	37.6	191.0	4.5	6.0	10.50	.313	7.00	.500	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37
12X 4X .375/.531T	22.54	36.9	34.0	226.8	5.0	6.1	12.53	.375	4.00	.531	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
12X 5X .375/.469T	23.26	37.3	36.3	234.8	5.0	6.3	12.47	.375	5.00	.469	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
12X 4X .375/.594T	23.39	37.6	36.4	237.9	5.1	6.3	12.59	.375	4.00	.594	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
7X 7X .375/.625T	23.80	21.3	30.2	99.0	3.2	4.6	7.63	.375	7.00	.625	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97
10X 7X .313/.563T	24.00	30.8	41.0	190.7	4.5	6.2	10.56	.313	7.00	.563	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39
12X 4X .375/.656T	24.24	38.2	38.5	248.3	5.1	6.5	12.66	.375	4.00	.656	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85
12X 5X .375/.531T	24.34	38.1	39.2	247.5	5.1	6.5	12.53	.375	5.00	.531	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
9X 8X .313/.563T	24.85	27.6	40.6	161.7	4.1	5.9	9.56	.313	8.00	.563	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
12X 6X .375/.469T	24.85	38.3	40.9	252.0	5.1	6.6	12.47	.375	6.00	.469	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
12X 5X .375/.594T	25.40	38.7	42.9	259.5	5.1	6.7	12.59	.375	5.00	.594	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
10X 8X .313/.563T	25.94	31.2	45.7	201.2	4.5	6.4	10.56	.313	8.00	.563	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39	3.39
12X 6X .375/.531T	26.15	39.0	44.4	255.9	5.1	6.8	12.53	.375	6.00	.531	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
12X 5X .375/.656T	26.45	39.4	44.8	271.3	5.2	6.9	12.66	.375	5.00	.656	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85
12X 7X .375/.469T	26.45	39.0	45.5	267.7	5.1	6.9	12.47	.375	7.00	.469	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
7X 7X .438/.688T	26.79	22.3	32.8	105.8	3.2	4.7	7.69	.438	7.00	.688	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49	3.49
12X 6X .375/.594T	27.40	39.7	47.8	278.8	5.2	7.0	12.59	.375	6.00	.594	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
12X 7X .375/.531T	27.95	39.7	49.6	282.6	5.2	7.1	12.53	.375	7.00	.531	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
7X 7X .438/.750T	28.25	22.6	35.0	118.3	3.2	4.9	7.75	.438	7.00	.750	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52
12X 6X .375/.656T	28.70	40.3	51.1	291.3	5.2	7.2	12.66	.375	6.00	.656	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85
12X 7X .375/.594T	29.44	40.4	53.5	286.2	5.2	7.3	12.59	.375	7.00	.594	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
14X 5X .438/.531T	29.85	48.2	49.3	361.0	5.7	7.5	14.53	.438	5.00	.531	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49
14X 5X .438/.594T	30.91	49.1	52.5	377.2	5.7	7.7	14.59	.438	5.00	.594	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51
12X 7X .375/.594T	30.91	41.0	57.4	309.4	5.2	7.5	12.66	.375	7.00	.594	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83	4.83
14X 6X .438/.531T	31.65	49.4	55.2	386.3	5.7	7.8	14.53	.438	6.00	.531	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49
14X 5X .438/.656T	31.99	49.9	55.8	393.3	5.8	7.9	14.66	.438	5.00	.656	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54
7X 7X .500/.875T	32.74	23.9	39.3	121.3	3.2	5.1	7.88	.500	7.00	.875	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08	4.08
14X 6X .438/.594T	32.95	50.3	59.0	404.0	5.8	8.0	14.59	.438	6.00	.594	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51	6.51
14X 5X .438/.719T	33.05	50.6	58.9	408.4	5.8	8.1	14.72	.438	5.00	.719	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57
12X 8X .375/.656T	33.15	41.6	63.5	325.4	5.2	7.8	12.66	.375	8.00	.656	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85	4.85
7X 6X .563/1.000T	33.60	24.8	38.5	125.0	3.2	5.0	8.00	.563	6.00	1.000	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66

0.2813 - 9/32 in.

281 IN. PLATE (AREA= 2.37 SQ.IN.)

***** BEAM DIMENSIONS *****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													

0.2813 - 9/32 in.



.281 IN. PLATE (AREA= 2.37 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****		***** FLANGE *****		SHEAR AREA
		ZPL	ZFL	INERTIA					WEB THICK	WIDTH	THICK	THICK	
16X10X .500/.875T	56.95	71.5	132.1	790.2	6.5	11.1	6.0	16.75	.500	10.00	.875	.875	8.58
18X10X .563/.719T	58.85	85.9	134.6	990.4	7.1	11.6	7.4	17.31	.563	10.00	.719	.719	10.70
18X 8X .563/1.000T	61.64	88.1	142.8	1050.4	7.2	11.9	7.4	18.13	.563	8.00	1.000	1.000	10.86
18X11X .563/.875T	67.15	89.8	164.9	1113.6	7.1	12.4	6.8	19.75	.563	11.00	.875	.875	10.79
18X10X .563/1.000T	68.44	90.6	168.5	1136.3	7.1	12.5	6.7	20.13	.563	10.00	1.000	1.000	10.86
18X12X .563/.875T	70.14	90.7	175.9	1146.9	7.1	12.6	6.5	20.63	.563	12.00	.875	.875	10.79
18X 9X .625/1.125T	72.69	95.7	171.0	1191.4	7.1	12.4	7.0	21.38	.625	9.00	1.125	1.125	12.13
21X 9X .688/.875T	75.85	120.2	178.6	1591.9	8.0	13.2	8.9	22.31	.688	9.00	.875	.875	15.25
21X10X .688/.875T	79.85	122.1	191.7	1652.7	8.0	13.5	8.6	23.19	.688	10.00	.875	.875	15.25
21X 8X .688/1.125T	79.70	123.6	192.9	1686.0	8.1	13.7	8.7	23.44	.688	8.00	1.125	1.125	15.42
21X11X .688/.875T	81.80	123.8	204.8	1709.5	8.0	13.8	8.3	24.06	.688	11.00	.875	.875	15.25
21X 9X .688/1.125T	83.50	125.7	209.3	1760.2	8.1	14.0	8.4	24.56	.688	9.00	1.125	1.125	15.42
21X12X .688/.875T	84.80	125.3	217.7	1762.7	8.0	14.1	8.1	24.94	.688	12.00	.875	.875	15.25
21X10X .688/1.125T	87.35	127.6	225.5	1826.4	8.1	14.3	8.1	25.69	.688	10.00	1.125	1.125	15.42
21X13X .688/.875T	87.75	126.7	230.5	1812.1	8.0	14.3	7.9	25.81	.688	13.00	.875	.875	15.25
24X10X .750/.875T	90.95	156.2	231.8	2348.4	9.0	15.0	10.1	26.75	.750	10.00	.875	.875	18.87
24X 8X .750/1.125T	91.80	158.0	233.3	2393.7	9.0	15.2	10.3	27.00	.750	8.00	1.125	1.125	19.06
24X11X .750/.875T	93.94	158.6	246.4	2427.9	9.0	15.3	9.9	27.63	.750	11.00	.875	.875	18.87
24X 9X .750/1.125T	95.64	160.9	251.9	2495.4	9.0	15.5	9.9	28.13	.750	9.00	1.125	1.125	19.06
24X12X .750/.875T	96.90	160.7	261.1	2503.2	9.0	15.6	9.6	28.50	.750	12.00	.875	.875	18.87
24X10X .750/1.125T	99.45	163.5	270.5	2598.2	9.1	15.8	9.6	29.25	.750	10.00	1.125	1.125	19.06
24X13X .750/.875T	99.89	162.6	276.0	2574.8	9.0	15.8	9.3	29.38	.750	13.00	.875	.875	18.87
21X14X .688/1.125T	102.65	133.3	290.1	2046.8	7.9	15.4	7.1	30.19	.688	14.00	1.125	1.125	15.42
21X15X .688/1.125T	106.45	134.4	306.0	2092.7	7.9	15.6	6.8	31.31	.688	15.00	1.125	1.125	15.42
24X12X .750/1.125T	107.10	168.0	307.5	2760.6	9.0	16.4	9.0	31.50	.750	12.00	1.125	1.125	19.06
24X13X .750/1.125T	110.94	169.9	326.0	2837.8	9.0	16.7	8.7	32.63	.750	13.00	1.125	1.125	19.06
27X 9X .875/1.500T	126.24	222.8	362.8	3972.6	10.0	17.8	11.0	37.13	.875	9.00	1.500	1.500	25.18
27X10X .875/1.375T	127.09	222.7	369.1	3980.8	10.0	17.9	10.8	37.38	.875	10.00	1.375	1.375	25.08
27X13X .875/1.125T	138.05	223.4	389.1	4031.8	10.0	18.0	10.4	38.25	.875	13.00	1.125	1.125	24.86
27X10X .875/1.500T	131.34	226.5	389.7	4123.0	10.0	18.2	10.6	38.63	.875	10.00	1.500	1.500	25.18
27X11X .875/1.375T	131.75	226.0	394.0	4116.6	10.0	18.2	10.4	38.75	.875	11.00	1.375	1.375	25.08
27X14X .875/1.125T	133.89	225.9	409.8	4137.2	10.0	18.3	10.1	39.38	.875	14.00	1.125	1.125	24.86
27X15X .875/1.125T	137.70	228.2	430.1	4236.4	9.9	18.6	9.8	40.50	.875	15.00	1.125	1.125	24.86
27X13X .875/1.500T	146.64	235.5	470.0	4515.4	10.0	19.2	9.6	43.13	.875	13.00	1.500	1.500	25.18
30X10X1.000/1.375T	148.75	285.7	439.0	5479.6	10.9	19.2	12.5	43.75	1.000	10.00	1.375	1.375	31.66
30X10X1.000/1.500T	153.00	290.7	462.1	5671.0	10.9	19.5	12.3	45.00	1.000	10.00	1.500	1.500	31.78
30X11X1.000/1.375T	153.44	290.2	466.7	5665.6	10.9	19.5	12.1	45.13	1.000	11.00	1.375	1.375	31.66
30X10X1.000/1.750T	161.50	299.8	507.3	6036.1	11.0	20.1	11.9	47.50	1.000	10.00	1.750	1.750	32.83

0.2813 - 9/32 in.

0.313 IN. PLATE (AREA= 2.93 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		BEAM DIMENSIONS		FLANGE		SHEAR	
WT/FT		ZPL ZFL		AREA		DEPTH		THICK	
3X 2X .125/ .188T		6.7 1.6		.75 2.8		3.19		.125	
4X 2X .125/ .188T		9.2 2.2		.88 3.6		4.19		.125	
5X 2X .188/ .250T		7.1 2.1		1.06 2.8		3.25		.188	
6X 2X .188/ .313T		7.5 2.4		1.19 2.7		3.31		.188	
7X 2X .188/ .313T		7.7 2.8		1.31 2.6		3.25		.188	
8X 2X .188/ .313T		10.2 3.4		1.38 3.5		4.31		.188	
9X 2X .188/ .313T		12.4 3.9		1.44 4.2		5.25		.188	
10X 2X .188/ .313T		12.9 4.5		1.56 4.2		5.31		.188	
11X 2X .188/ .313T		15.7 5.7		1.75 4.9		6.31		.188	
12X 2X .188/ .313T		16.0 6.4		1.88 4.7		6.25		.188	
13X 2X .188/ .313T		11.3 5.9		2.06 4.6		6.31		.188	
14X 2X .188/ .313T		16.6 7.4		2.19 4.3		6.31		.188	
15X 2X .188/ .313T		7.5 7.5		2.38 3.7		6.31		.188	
16X 2X .188/ .313T		9.2 8.0		2.56 3.7		5.44		.250	
17X 2X .188/ .313T		17.6 9.9		2.69 5.1		7.31		.250	
18X 2X .188/ .313T		20.2 10.8		2.81 5.0		7.38		.250	
19X 2X .188/ .313T		22.7 11.5		2.94 5.7		8.31		.250	
20X 2X .188/ .313T		20.4 11.7		3.06 4.8		7.44		.250	
21X 2X .188/ .313T		23.3 12.8		3.13 5.6		8.38		.250	
22X 2X .188/ .313T		23.6 13.8		3.25 5.4		8.31		.250	
23X 2X .188/ .313T		23.9 14.1		3.31 5.5		8.44		.250	
24X 2X .188/ .313T		18.3 13.1		3.38 3.9		6.38		.250	
25X 2X .188/ .313T		24.2 15.5		3.50 5.3		8.38		.250	
26X 2X .188/ .313T		21.6 15.7		3.63 4.5		7.38		.250	
27X 2X .188/ .313T		18.7 14.8		3.69 3.8		6.44		.250	
28X 2X .188/ .313T		17.3 17.3		3.75 5.2		8.44		.250	
29X 2X .188/ .313T		24.9 18.3		3.88 5.0		8.38		.250	
30X 2X .188/ .313T		22.0 17.6		3.94 4.3		7.44		.250	
31X 2X .188/ .313T		19.0 17.1		4.13 3.6		6.44		.250	
32X 2X .188/ .313T		20.4 20.4		4.19 4.9		8.44		.250	
33X 2X .188/ .313T		25.4 25.4		4.31 5.8		9.38		.250	
34X 2X .188/ .313T		14.89 22.4		4.38 4.1		7.44		.250	
35X 2X .188/ .313T		15.50 28.7		4.56 5.7		9.44		.250	
36X 2X .188/ .313T		15.74 31.6		4.63 6.3		10.38		.250	
37X 2X .188/ .313T		25.9 23.5		4.63 4.6		8.44		.250	
38X 2X .188/ .313T		29.3 22.6		4.69 5.5		9.38		.250	
39X 2X .188/ .313T		16.35 32.3		4.81 6.2		10.44		.250	
40X 2X .188/ .313T		17.00 32.5		5.00 6.1		10.38		.250	
41X 2X .188/ .313T		17.20 33.0		5.06 5.4		9.56		.250	
42X 2X .188/ .313T		17.44 33.3		5.13 6.1		10.50		.250	
43X 2X .188/ .313T		18.05 33.3		5.31 5.9		10.44		.250	

0.3125 - 5/16 in.



.313 IN. PLATE (AREA= 2.93 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	Y <sub>P</sub>	Y <sub>F</sub>	***** BEAM DIMENSIONS *****					SHEAR AREA	
	WT/FT	Z <sub>P</sub>	Z <sub>F</sub>				INERTIA	AREA	DEPTH	WEB THICK	WIDTH		FLANGE THICK
10X 4X .313/.563T	18.29	33.6	27.8	165.5	4.5	4.9	5.9	5.38	10.56	.313	4.00	.563	3.40
9X 6X .313/.438T	16.50	30.2	27.7	150.9	4.1	4.7	5.1	5.44	9.44	.313	6.00	.438	3.05
10X 5X .313/.500T	19.14	33.9	30.1	172.4	4.5	5.1	5.7	5.63	10.50	.313	5.00	.500	3.30
7X 7X .313/.500T	19.35	23.6	26.0	96.8	3.4	4.1	3.7	5.69	7.50	.313	7.00	.500	2.45
10X 6X .313/.438T	19.55	34.0	31.3	175.2	4.5	5.1	5.6	5.75	10.44	.313	6.00	.438	3.37
9X 6X .313/.500T	19.75	30.8	30.4	150.2	4.1	4.9	4.9	5.81	9.50	.313	6.00	.500	3.07
10X 5X .313/.563T	20.20	34.5	32.6	182.4	4.5	5.3	5.6	5.94	10.56	.313	5.00	.563	3.40
7X 7X .313/.563T	20.84	24.0	28.5	102.6	3.4	4.3	3.6	6.13	7.56	.313	7.00	.563	2.46
10X 6X .313/.500T	20.84	34.7	34.4	186.7	4.5	5.4	5.4	6.13	10.50	.313	6.00	.500	3.30
9X 7X .313/.500T	21.45	31.3	34.3	160.4	4.2	5.1	4.7	6.31	9.50	.313	7.00	.500	3.07
12X 4X .375/.469T	21.69	41.5	32.7	233.6	5.0	5.6	7.2	6.38	12.47	.375	4.00	.469	4.79
8X 7X .313/.563T	21.90	27.8	33.0	134.0	3.8	4.8	4.1	6.44	8.56	.313	7.00	.563	2.78
10X 6X .313/.563T	22.10	35.2	37.4	197.3	4.6	5.6	5.3	6.50	10.56	.313	6.00	.563	3.40
10X 7X .313/.500T	22.54	35.2	38.6	199.3	4.6	5.7	5.2	6.63	10.50	.313	7.00	.500	3.30
12X 4X .375/.531T	22.54	42.3	35.1	246.2	5.1	5.8	7.0	6.63	12.53	.375	4.00	.531	4.82
12X 5X .375/.469T	23.26	42.8	37.4	255.1	5.1	6.0	6.8	6.84	12.47	.375	5.00	.469	4.79
12X 4X .375/.594T	23.39	43.1	37.5	258.5	5.1	6.0	6.9	6.88	12.59	.375	4.00	.594	4.84
7X 7X .375/.625T	23.80	24.9	31.1	110.0	3.3	4.4	3.5	7.00	7.63	.375	7.00	.625	2.98
10X 7X .313/.563T	24.00	35.8	42.1	218.4	4.6	5.9	5.0	7.06	10.56	.313	7.00	.563	3.40
12X 4X .375/.656T	24.24	43.8	39.7	270.1	5.2	6.2	6.8	7.13	12.66	.375	4.00	.656	4.86
12X 5X .375/.531T	24.34	43.6	40.4	269.3	5.2	6.2	6.7	7.16	12.53	.375	5.00	.531	4.82
9X 8X .313/.563T	24.85	32.2	41.8	179.4	4.2	5.6	4.3	7.31	9.56	.313	8.00	.563	3.09
12X 6X .375/.469T	24.85	43.8	42.1	274.4	5.2	6.3	6.5	7.31	12.47	.375	6.00	.469	4.79
12X 5X .375/.594T	25.40	44.4	43.3	282.7	5.2	6.4	6.5	7.47	12.59	.375	5.00	.594	4.84
10X 8X .313/.563T	25.94	36.3	47.0	282.6	4.6	6.1	4.7	7.63	10.56	.313	8.00	.563	3.40
12X 6X .375/.531T	26.15	44.6	45.7	290.0	5.2	6.5	6.3	7.69	12.53	.375	6.00	.531	4.82
12X 5X .375/.656T	26.45	45.1	46.2	295.9	5.3	6.6	6.4	7.78	12.66	.375	5.00	.656	4.86
12X 7X .375/.469T	26.45	44.7	46.8	292.1	5.2	6.5	6.2	7.78	12.47	.375	7.00	.469	4.79
7X 7X .438/.688T	26.79	25.9	33.8	117.4	3.3	4.5	3.5	7.88	7.69	.438	7.00	.688	3.51
12X 6X .375/.594T	27.40	45.4	49.2	304.5	5.3	6.7	6.2	8.06	12.59	.375	6.00	.594	4.84
12X 7X .375/.531T	27.95	45.5	51.0	304.5	5.3	6.8	6.1	8.22	12.53	.375	7.00	.531	4.82
7X 7X .438/.750T	28.25	26.2	36.1	122.6	3.3	4.7	3.4	8.31	7.75	.438	7.00	.750	3.53
12X 6X .375/.656T	28.70	46.1	52.6	318.6	5.3	6.9	6.1	8.44	12.66	.375	6.00	.656	4.86
12X 7X .375/.594T	29.44	46.2	55.0	324.2	5.3	7.0	5.9	8.66	12.59	.375	7.00	.594	4.84
14X 5X .438/.531T	29.85	54.4	50.9	390.2	5.8	7.2	7.7	8.78	14.53	.438	5.00	.531	6.50
14X 5X .438/.594T	30.91	55.4	54.2	408.1	5.8	7.4	7.5	9.09	14.59	.438	5.00	.594	6.53
12X 7X .375/.656T	30.91	46.9	59.1	339.2	5.3	7.2	5.7	9.09	12.66	.375	7.00	.656	4.86
12X 8X .375/.594T	31.45	46.9	60.9	344.8	5.3	7.3	5.6	9.25	12.59	.375	8.00	.594	4.84
14X 6X .438/.531T	31.65	55.8	56.9	418.2	5.8	7.5	7.3	9.31	14.53	.438	6.00	.531	6.50
14X 5X .438/.656T	31.99	56.3	57.5	425.8	5.9	7.6	7.4	9.41	14.66	.438	5.00	.656	6.56
7X 7X .500/.875T	32.74	27.6	40.7	134.6	3.3	4.9	3.3	9.63	7.88	.500	7.00	.875	4.10
14X 6X .438/.594T	32.95	56.8	60.9	437.8	5.9	7.7	7.2	9.69	14.59	.438	6.00	.594	6.53
14X 5X .438/.719T	33.05	57.1	60.7	442.5	5.9	7.7	7.3	9.72	14.72	.438	5.00	.719	6.58
12X 8X .375/.656T	33.15	47.6	65.5	357.4	5.3	7.5	5.5	9.75	12.66	.375	8.00	.656	4.86
7X 6X .563/1.000T	33.80	28.5	39.9	139.2	3.3	4.8	3.5	9.94	8.00	.563	6.00	1.000	4.68

0.3125 - 5/16 in.

.313 IN. PLATE (AREA= 2.93 SQ.IN.)

NOMINAL SIZE				SECTION MODULUS			DIMENSIONS										FLANGE		SHEAR	



0.313 IN. PLATE (AREA= 2.93 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	FLANGE THICK	
16X10X .500/ .875T	56.95	79.5	136.0	862.5	6.6	10.9	6.3	16.75	16.88	.500	10.00	.875	8.60
18X10X .563/ .719T	58.85	94.4	138.4	1068.4	7.3	11.3	7.7	17.31	18.72	.563	10.00	.719	10.72
18X 8X .563/1.000T	61.64	96.7	147.8	1126.7	7.3	11.6	7.7	18.13	19.00	.563	8.00	1.000	10.87
18X11X .563/ .875T	67.15	98.6	169.5	1196.3	7.3	12.1	7.1	19.75	18.88	.563	11.00	.875	10.81
18X10X .563/1.000T	68.44	99.5	173.3	1220.8	7.3	12.3	7.0	20.13	19.00	.563	10.00	1.000	10.87
18X12X .563/ .875T	70.14	99.6	180.9	1232.8	7.2	12.4	6.6	20.63	16.88	.563	12.00	.875	10.81
18X 9X .625/1.125T	72.69	104.5	175.8	1274.8	7.2	12.2	7.2	21.38	19.13	.625	9.00	1.125	12.15
21X 9X .688/ .875T	75.85	129.8	183.2	1686.4	8.2	13.0	9.2	22.31	21.88	.688	9.00	.875	15.27
21X10X .688/ .875T	78.65	131.9	196.6	1751.6	8.2	13.3	8.9	23.19	21.88	.688	10.00	.875	15.27
21X 8X .688/1.125T	79.70	133.4	197.9	1788.7	8.2	13.4	9.0	23.44	22.13	.688	8.00	1.125	15.44
21X11X .688/ .875T	81.88	133.7	210.0	1812.5	8.2	13.6	8.6	24.06	21.88	.688	11.00	.875	15.27
21X 9X .688/1.125T	83.50	135.7	214.7	1866.1	8.2	13.8	8.7	24.56	22.13	.688	9.00	1.125	15.44
21X12X .688/ .875T	84.80	135.3	223.2	1869.5	8.2	13.8	8.4	24.94	21.88	.688	12.00	.875	15.27
21X10X .688/1.125T	87.35	137.7	231.3	1937.1	8.2	14.1	8.4	25.69	22.13	.688	10.00	1.125	15.44
21X13X .688/ .875T	87.75	136.8	236.3	1922.6	8.2	14.1	8.1	25.81	21.88	.688	13.00	.875	15.27
24X10X .750/ .875T	90.95	167.2	237.3	2470.6	9.1	14.8	10.4	26.75	24.88	.750	10.00	.875	18.89
24X 8X .750/1.125T	91.80	169.0	238.9	2518.0	9.2	14.9	10.5	27.00	25.13	.750	8.00	1.125	19.08
24X11X .750/ .875T	93.94	169.6	252.2	2554.8	9.1	15.1	10.1	27.63	24.88	.750	11.00	.875	18.89
24X12X .750/ .875T	96.90	171.8	267.2	2634.6	9.2	15.3	9.9	28.50	24.88	.750	12.00	.875	18.89
24X13X .750/1.125T	99.45	174.8	276.9	2726.2	9.2	15.6	9.6	29.25	25.13	.750	10.00	1.125	19.08
24X10X .750/ .875T	99.89	173.8	282.4	2710.8	9.2	15.6	9.6	29.38	24.88	.750	13.00	.875	18.89
21X14X .688/1.125T	102.65	143.7	297.4	2174.7	8.1	15.1	7.3	30.19	22.13	.688	14.00	1.125	15.44
21X15X .688/1.125T	106.45	144.9	313.6	2224.3	8.1	15.4	7.1	31.31	22.13	.688	15.00	1.125	15.44
24X12X .750/1.125T	107.10	179.5	314.6	2907.2	9.2	16.2	9.2	31.50	25.13	.750	12.00	1.125	19.08
24X13X .750/1.125T	110.94	181.4	333.4	2989.5	9.2	16.5	9.0	32.63	25.13	.750	13.00	1.125	19.08
27X 9X .875/1.500T	126.24	235.3	370.2	4145.7	10.2	17.6	11.2	37.13	28.50	.875	9.00	1.500	25.21
27X10X .875/1.375T	127.09	235.3	376.6	4154.8	10.2	17.7	11.0	37.38	28.38	.875	10.00	1.375	25.11
27X13X .875/1.125T	130.05	236.0	396.9	4209.3	10.1	17.8	10.6	38.25	28.13	.875	13.00	1.125	24.89
27X10X .875/1.500T	131.34	239.2	397.6	4303.6	10.2	18.0	10.8	38.63	28.50	.875	10.00	1.500	25.21
27X11X .875/1.375T	131.75	238.7	402.8	4297.4	10.2	18.0	10.7	38.75	28.38	.875	11.00	1.375	25.11
27X14X .875/1.125T	133.89	238.6	418.0	4320.0	10.1	18.1	10.3	39.38	28.13	.875	14.00	1.125	24.89
27X15X .875/1.125T	137.70	241.0	438.6	4424.2	10.1	18.4	10.1	40.50	28.13	.875	15.00	1.125	24.89
30X13X .875/1.500T	146.64	248.5	479.4	4716.0	10.1	19.0	9.8	43.13	28.50	.875	13.00	1.500	25.21
30X10X1.000/1.375T	148.75	299.3	446.9	5680.3	11.0	19.0	12.7	43.75	31.38	1.000	10.00	1.375	31.69
30X10X1.000/1.500T	153.00	304.4	470.4	5878.8	11.1	19.3	12.5	45.00	31.50	1.000	10.00	1.500	31.81
30X11X1.000/1.375T	153.44	303.9	475.0	5873.7	11.1	19.3	12.4	45.13	31.38	1.000	11.00	1.375	31.69
30X10X1.000/1.750T	161.50	313.8	516.3	6257.6	11.1	19.9	12.1	47.50	31.75	1.000	10.00	1.750	32.06

0.3125 - 5/16 in.

SECTION MODULUS										***** BEAM DIMENSIONS *****					SHEAR AREA	
NOMINAL SIZE			WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	AREA
3X 2X .125/ .188T	2.55	7.7	1.6	4.6	1.0	.6	2.9	.75	3.19	.125	.125	2.00	2.00	.188	.44	
4X 2X .125/ .188T	2.99	10.6	2.2	8.3	1.4	.8	3.8	.88	4.19	.125	.125	2.00	2.00	.188	.57	
3X 2X .188/ .250T	3.60	8.1	2.1	6.0	1.1	.7	2.9	1.06	3.25	.188	.188	2.00	2.00	.250	.68	
3X 2X .188/ .313T	4.05	8.6	2.5	7.0	1.2	.8	2.8	1.19	3.31	.188	.188	2.00	2.00	.313	.69	
3X 3X .188/ .250T	4.45	8.9	2.9	7.8	1.3	.9	2.7	1.31	3.25	.188	.188	3.00	3.00	.250	.68	
4X 2X .188/ .313T	4.69	11.9	3.5	12.5	1.6	1.1	3.6	1.38	4.31	.188	.188	2.00	2.00	.313	.87	
5X 2X .188/ .250T	4.90	14.4	4.0	17.4	1.9	1.2	4.4	1.44	5.25	.188	.188	2.00	2.00	.250	1.05	
5X 2X .188/ .313T	5.30	15.0	4.5	19.7	2.0	1.3	4.3	1.56	5.31	.188	.188	2.00	2.00	.313	1.06	
6X 2X .188/ .313T	5.95	18.3	5.8	29.1	2.3	1.6	5.1	1.75	6.31	.188	.188	2.00	2.00	.313	1.25	
6X 3X .188/ .250T	6.39	18.7	6.5	31.9	2.4	1.7	4.9	1.88	6.25	.188	.188	3.00	3.00	.250	1.24	
4X 4X .188/ .313T	6.80	13.2	5.9	19.1	1.9	1.4	3.2	2.00	4.31	.188	.188	4.00	4.00	.313	.87	
6X 3X .188/ .313T	7.00	19.4	7.5	36.1	2.5	1.9	4.8	2.06	6.31	.188	.188	3.00	3.00	.313	1.25	
5X 4X .188/ .313T	7.45	16.7	7.6	29.5	2.3	1.8	3.9	2.19	5.31	.188	.188	4.00	4.00	.313	1.06	
6X 4X .188/ .313T	8.09	20.2	9.4	42.6	2.7	2.1	4.5	2.38	6.31	.188	.188	4.00	4.00	.313	1.25	
5X 3X .250/ .438T	8.70	17.0	8.2	32.0	2.3	1.9	3.9	2.56	5.44	.250	.250	3.00	3.00	.438	1.45	
7X 3X .250/ .313T	9.15	22.9	9.9	52.8	2.9	2.3	5.3	2.69	7.31	.250	.250	3.00	3.00	.313	1.91	
6X 3X .250/ .438T	9.55	20.6	10.1	46.1	2.7	2.2	4.5	2.81	6.44	.250	.250	3.00	3.00	.438	1.70	
7X 3X .250/ .375T	9.79	23.6	11.0	58.1	3.0	2.5	5.3	2.88	7.38	.250	.250	3.00	3.00	.375	1.93	
8X 3X .250/ .313T	10.00	26.4	11.8	70.4	3.3	2.7	6.0	2.94	8.31	.250	.250	3.00	3.00	.313	2.16	
7X 4X .250/ .313T	10.20	23.8	11.9	60.7	3.0	2.6	5.1	3.00	7.31	.250	.250	4.00	4.00	.313	1.91	
7X 3X .250/ .438T	10.40	24.1	12.2	63.0	3.1	2.6	5.2	3.06	7.44	.250	.250	3.00	3.00	.438	1.95	
8X 3X .250/ .375T	10.64	27.2	13.1	77.0	3.4	2.8	5.9	3.13	8.38	.250	.250	3.00	3.00	.375	2.18	
8X 4X .250/ .313T	11.05	27.5	14.1	80.5	3.4	2.9	5.7	3.25	8.31	.250	.250	4.00	4.00	.313	2.16	
8X 3X .250/ .438T	11.25	27.8	14.4	83.3	3.5	3.0	5.8	3.31	8.44	.250	.250	3.00	3.00	.438	2.20	
6X 5X .250/ .375T	11.49	21.4	13.4	55.3	2.8	2.6	4.1	3.38	6.38	.250	.250	5.00	5.00	.375	1.68	
8X 4X .250/ .375T	11.90	28.2	15.8	88.3	3.5	3.1	5.6	3.50	8.38	.250	.250	4.00	4.00	.375	2.18	
7X 5X .250/ .375T	12.34	25.2	16.0	75.4	3.2	3.0	4.7	3.63	7.38	.250	.250	5.00	5.00	.375	1.93	
6X 5X .250/ .438T	12.55	21.9	15.1	60.5	2.9	2.8	4.0	3.69	6.44	.250	.250	5.00	5.00	.438	1.70	
8X 4X .250/ .438T	12.75	28.9	17.6	96.1	3.6	3.3	5.3	3.75	8.44	.250	.250	4.00	4.00	.438	2.20	
8X 5X .250/ .375T	13.19	29.0	18.6	99.0	3.7	3.4	5.3	3.88	8.38	.250	.250	5.00	5.00	.375	2.18	
7X 5X .250/ .438T	13.40	25.7	17.9	82.2	3.3	3.2	4.6	3.94	7.44	.250	.250	5.00	5.00	.438	1.95	
6X 6X .250/ .438T	14.04	22.3	17.5	66.5	2.9	3.0	3.8	4.13	6.44	.250	.250	6.00	6.00	.438	1.70	
8X 5X .250/ .438T	14.25	29.6	20.8	107.3	3.7	3.6	5.2	4.19	8.44	.250	.250	5.00	5.00	.438	2.20	
9X 4X .313/ .375T	14.65	32.5	19.3	117.8	3.9	3.6	6.1	4.31	9.38	.313	.313	4.00	4.00	.375	3.04	
7X 6X .250/ .438T	14.89	26.2	20.7	90.0	3.4	3.4	4.4	4.38	7.44	.250	.250	6.00	6.00	.438	1.95	
9X 4X .313/ .438T	15.50	33.2	21.3	126.8	4.0	3.8	6.0	4.56	9.44	.313	.313	4.00	4.00	.438	3.06	
10X 4X .313/ .375T	15.74	36.4	22.1	147.6	4.2	4.1	6.7	4.63	10.38	.313	.313	4.00	4.00	.375	3.36	
8X 6X .250/ .438T	15.74	30.2	24.0	117.4	3.8	3.9	4.9	4.63	8.44	.250	.250	6.00	6.00	.438	2.20	
9X 5X .313/ .375T	15.95	33.4	22.4	130.4	4.0	3.9	5.8	4.69	9.38	.313	.313	5.00	5.00	.375	3.04	
9X 4X .313/ .500T	16.35	33.9	23.2	135.5	4.0	4.0	5.8	4.81	9.50	.313	.313	4.00	4.00	.500	3.08	
10X 4X .313/ .438T	16.59	37.3	24.3	156.5	4.3	4.3	6.5	4.88	10.44	.313	.313	4.00	4.00	.438	3.38	
10X 5X .313/ .375T	17.00	37.5	25.5	162.9	4.4	4.3	6.4	5.00	10.38	.313	.313	5.00	5.00	.375	3.36	
9X 4X .313/ .563T	17.20	34.5	25.1	144.1	4.1	4.2	5.7	5.06	9.56	.313	.313	4.00	4.00	.563	3.10	
10X 4X .313/ .500T	17.44	38.1	26.4	169.1	4.4	4.4	6.4	5.13	10.50	.313	.313	4.00	4.00	.500	3.39	
10X 5X .313/ .438T	18.05	38.4	28.1	175.1	4.4	4.6	6.2	5.31	10.44	.313	.313	5.00	5.00	.438	3.38	

0.3438 - 11/32 in.



---

0.3438 - 11/32 in.

.344 IN. PLATE (AREA= 3.55 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****				SHEAR AREA
		ZPL	ZFL	INERTIA				DEPTH	THICK	WIDTH	THICK	
14X 6X .438/.656T	34.20	64.9	66.6	493.3	6.0	7.6	7.4	10.06	.438	6.00	.656	6.57
14X 7X .438/.594T	34.95	65.2	69.4	502.2	6.0	7.7	7.2	10.28	.438	7.00	.594	6.54
12X 9X .375/.656T	35.39	54.8	73.6	408.6	5.4	7.5	5.6	10.41	.375	9.00	.656	4.88
14X 6X .438/.719T	35.50	65.9	70.6	513.4	6.1	7.8	7.3	10.44	.438	6.00	.719	6.60
14X 7X .438/.656T	36.45	66.2	74.1	524.6	6.1	7.9	7.1	10.72	.438	7.00	.656	6.57
14X 8X .438/.594T	36.99	66.3	76.3	529.8	6.1	8.0	6.9	10.88	.438	8.00	.594	6.54
7X 7X .563/1.000T	37.28	33.0	46.5	161.0	3.3	4.9	3.5	10.94	.563	7.00	1.000	4.70
16X 5X .500/.594T	37.30	75.9	68.7	610.9	6.5	8.0	8.9	10.97	.500	5.00	.594	8.47
14X 7X .438/.719T	37.94	67.1	78.8	546.2	6.1	8.1	6.9	11.16	.438	7.00	.719	6.60
16X 5X .500/.656T	38.35	77.1	72.4	634.9	6.5	8.2	8.8	11.28	.500	5.00	.656	8.50
14X 8X .438/.656T	38.69	67.3	81.5	553.1	6.1	8.2	6.8	11.38	.438	8.00	.656	6.57
16X 6X .500/.594T	39.30	77.9	76.4	653.1	6.6	8.4	8.5	11.56	.500	6.00	.594	8.47
16X 5X .500/.719T	39.41	78.3	76.1	658.6	6.6	8.4	8.7	11.59	.500	5.00	.719	8.53
12X 9X .438/.719T	39.85	57.3	79.8	435.7	5.3	7.6	5.5	11.72	.438	9.00	.719	5.72
14X 8X .438/.719T	40.39	68.2	86.8	575.5	6.1	8.4	6.6	11.88	.438	8.00	.719	6.60
16X 6X .500/.656T	40.60	79.1	80.8	680.0	6.6	8.6	8.2	12.16	.500	6.00	.656	8.50
41.34	79.6	84.0	692.0	6.6	8.7	8.2	8.4	11.94	.500	7.00	.594	8.47
7X 7X .625/1.125T	41.65	34.4	50.6	173.7	3.3	5.0	3.4	12.25	.625	7.00	1.125	5.30
16X 6X .500/.719T	41.85	80.3	85.3	706.0	6.7	8.8	8.3	12.31	.500	6.00	.719	8.53
16X 5X .500/.875T	42.09	80.9	85.3	715.1	6.7	8.8	8.4	12.38	.500	5.00	.875	8.61
12X 10X .438/.719T	42.30	57.9	88.9	453.9	5.3	7.8	5.2	12.44	.438	10.00	.719	5.72
16X 7X .500/.656T	42.81	80.8	89.2	721.0	6.7	8.9	8.1	12.59	.500	7.00	.656	8.50
14X 9X .438/.719T	42.81	69.1	94.9	602.6	6.1	8.7	6.3	12.59	.438	9.00	.719	6.60
16X 7X .500/.719T	44.30	82.0	94.5	749.1	6.7	9.1	7.9	13.03	.500	7.00	.719	8.53
16X 6X .500/.875T	45.05	82.9	96.3	767.4	6.8	9.3	8.0	13.25	.500	6.00	.875	8.61
16X 8X .500/.656T	45.05	82.3	97.5	758.9	6.7	9.2	7.8	13.25	.500	8.00	.656	8.50
14X 10X .438/.719T	45.25	69.9	102.9	627.1	6.1	9.0	6.1	13.31	.438	10.00	.719	6.60
7X 7X .688/1.250T	46.10	35.9	54.8	186.3	3.3	5.2	3.4	13.56	.688	7.00	1.250	5.91
16X 8X .500/.719T	46.75	83.5	103.6	788.8	6.8	9.5	7.6	13.75	.500	8.00	.719	8.53
16X 9X .500/.656T	47.29	83.6	105.9	794.2	6.7	9.5	7.5	13.91	.500	9.00	.656	8.50
18X 6X .563/.656T	47.80	95.3	96.9	913.3	7.2	9.6	9.4	14.06	.563	6.00	.656	10.70
16X 7X .500/.875T	48.04	84.6	107.3	814.9	6.8	9.6	7.6	14.13	.500	7.00	.875	8.61
18X 6X .563/.719T	49.10	96.8	102.0	946.6	7.3	9.8	9.3	14.44	.563	6.00	.719	10.73
16X 8X .500/.719T	49.20	84.7	112.6	825.1	6.8	9.7	7.3	14.47	.500	9.00	.719	8.53
16X 8X .500/.875T	51.00	86.0	118.2	857.7	6.8	10.0	7.3	15.00	.500	8.00	.875	8.61
18X 7X .563/.719T	51.54	98.9	112.1	1001.5	7.3	10.1	8.9	15.16	.563	7.00	.719	10.73
16X 10X .500/.719T	51.65	85.8	121.7	858.8	6.8	10.0	7.1	15.19	.500	10.00	.719	8.53
18X 8X .563/.656T	52.29	99.3	115.5	1014.8	7.3	10.2	8.8	15.38	.563	8.00	.656	10.70
14X 10X .500/.875T	53.55	74.5	128.1	699.7	6.0	9.4	5.8	15.75	.500	10.00	.875	7.61
16X 9X .500/.875T	53.99	87.3	129.1	896.7	6.8	10.3	6.9	15.88	.500	9.00	.875	8.61
18X 8X .563/.719T	53.99	100.8	122.0	1052.4	7.4	10.4	8.6	15.88	.563	8.00	.719	10.73
18X 9X .563/.656T	54.50	101.0	124.7	1060.1	7.4	10.5	8.5	16.03	.563	9.00	.656	10.70
18X 6X .563/1.000T	54.84	102.3	123.6	1082.9	7.4	10.6	8.6	16.13	.563	6.00	1.000	10.89
18X 7X .563/.875T	55.25	102.2	126.2	1085.6	7.4	10.6	8.6	16.25	.563	7.00	.875	10.82
12X 9X .438/.719T	56.41	102.4	132.4	1099.7	7.4	10.7	8.3	16.59	.438	9.00	.719	10.73

0.3438 - 11/32 in.



.344 IN. PLATE (AREA= 3.55 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YF	YF	***** BEAM DIMENSIONS *****				SHEAR AREA	
		ZPL	ZFL	INERTIA				AREA	DEPTH	WEB THICK	FLANGE WIDTH		THICK
16X10X .500/ .875T	56.95	86.3	139.8	932.0	6.8	10.6	6.7	16.75	16.88	.500	10.00	.875	8.61
18X10X .563/ .719T	58.85	103.9	142.1	1144.1	7.4	11.0	8.1	17.31	18.72	.563	10.00	.719	10.73
18X 8X .563/1.000T	61.64	106.4	150.9	1207.0	7.5	11.3	8.0	18.13	19.00	.563	8.00	1.000	10.89
18X11X .563/ .875T	67.15	108.4	174.0	1283.7	7.4	11.8	7.4	19.75	18.88	.563	11.00	.875	10.82
18X10X .563/1.000T	68.44	109.3	178.0	1318.2	7.4	12.0	7.4	20.13	19.00	.563	10.00	1.000	10.89
18X12X .563/ .875T	70.14	109.5	185.7	1323.8	7.4	12.1	7.1	20.63	18.88	.563	12.00	.875	10.82
18X 9X .625/1.125T	72.69	114.3	180.6	1363.2	7.4	11.9	7.5	21.38	19.13	.625	9.00	1.125	12.17
21X 9X .688/ .875T	75.85	140.6	187.8	1786.9	8.3	12.7	9.5	22.31	21.88	.688	9.00	.875	15.29
21X10X .688/ .875T	78.85	142.7	201.5	1856.8	8.3	13.0	9.2	23.19	21.88	.688	10.00	.875	15.29
21X 8X .688/1.125T	79.78	144.4	203.0	1895.8	8.4	13.1	9.3	23.44	22.13	.688	8.00	1.125	15.46
21X11X .688/ .875T	81.80	144.6	215.2	1922.2	8.3	13.3	8.9	24.06	21.88	.688	11.00	.875	15.29
21X 9X .688/1.125T	83.58	146.8	220.1	1978.9	8.4	13.5	9.0	24.56	22.13	.688	9.00	1.125	15.46
21X12X .688/ .875T	84.88	146.4	228.7	1983.6	8.3	13.6	8.7	24.94	21.88	.688	12.00	.875	15.29
21X10X .688/1.125T	87.35	148.9	237.0	2055.4	8.4	13.8	8.7	25.69	22.13	.688	10.00	1.125	15.46
21X13X .688/ .875T	87.75	148.0	242.8	2040.7	8.3	13.8	8.4	25.81	21.88	.688	13.00	.875	15.29
24X10X .750/ .875T	90.95	179.2	242.9	2601.4	9.3	14.5	10.7	26.75	24.88	.750	10.00	.875	18.92
24X 8X .750/1.125T	91.80	181.1	244.6	2650.9	9.3	14.6	10.8	27.00	25.13	.750	8.00	1.125	19.11
24X11X .750/ .875T	93.94	181.8	258.0	2690.6	9.3	14.8	10.4	27.63	24.88	.750	11.00	.875	18.92
24X 9X .750/1.125T	95.64	184.4	263.9	2765.1	9.3	15.0	10.5	28.13	25.13	.750	9.00	1.125	19.11
24X12X .750/ .875T	96.90	184.2	273.4	2775.5	9.3	15.1	10.2	28.50	24.88	.750	12.00	.875	18.92
24X10X .750/1.125T	99.45	187.3	283.3	2872.0	9.4	15.3	10.1	29.25	25.13	.750	10.00	1.125	19.11
24X13X .750/ .875T	99.89	186.3	288.8	2856.6	9.3	15.3	9.9	29.38	24.88	.750	13.00	.875	18.92
27X10X .875/1.125T	102.65	155.3	304.7	2312.0	8.3	14.9	7.6	30.19	22.13	.688	14.00	1.125	15.46
27X11X .875/1.125T	106.45	156.5	321.3	2365.7	8.2	15.1	7.4	31.31	22.13	.688	15.00	1.125	15.46
27X12X .875/1.125T	107.10	192.2	321.7	3064.8	9.4	15.9	9.5	31.50	25.13	.750	12.00	1.125	19.11
27X13X .875/1.125T	110.94	194.3	341.0	3152.6	9.3	16.2	9.2	32.63	25.13	.750	13.00	1.125	19.11
27X 9X .875/1.500T	126.24	249.3	377.9	4332.6	10.3	17.4	11.5	37.13	28.50	.875	9.00	1.500	25.24
27X10X .875/1.375T	127.09	249.2	384.4	4342.7	10.3	17.4	11.3	37.38	28.38	.875	10.00	1.375	25.13
27X13X .875/1.125T	130.05	250.0	405.0	4401.0	10.3	17.6	10.9	38.25	28.13	.875	13.00	1.125	24.91
27X10X .875/1.500T	131.34	253.3	405.9	4498.7	10.3	17.8	11.1	38.63	28.50	.875	10.00	1.500	25.24
27X11X .875/1.375T	131.75	252.8	418.3	4492.8	10.3	17.8	11.0	38.75	28.38	.875	11.00	1.375	25.13
27X14X .875/1.125T	133.89	252.7	426.4	4517.7	10.3	17.9	10.6	39.38	28.13	.875	14.00	1.125	24.91
27X15X .875/1.125T	137.70	255.2	447.4	4627.5	10.2	18.1	10.3	40.50	28.13	.875	15.00	1.125	24.91
27X13X .875/1.500T	146.64	263.0	489.0	4933.5	10.3	18.8	10.1	43.13	28.50	.875	13.00	1.500	25.24
30X10X1.000/1.375T	148.75	314.3	455.2	5898.0	11.2	18.8	13.0	43.75	31.38	1.000	10.00	1.375	31.72
30X10X1.000/1.500T	153.00	319.6	479.1	6104.3	11.2	19.1	12.7	45.00	31.50	1.000	10.00	1.500	31.84
30X11X1.000/1.375T	153.44	319.1	483.8	6099.5	11.2	19.1	12.6	45.13	31.38	1.000	11.00	1.375	31.72
30X10X1.000/1.750T	161.50	329.3	525.7	6498.1	11.3	19.7	12.4	47.50	31.75	1.000	10.00	1.750	32.80

0.3438 - 11/32 in.

-.375 IN. PLATE (AREA= 4.22 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR AREA	
		WT/FT	ZPL	ZFL	INERZIA	R	VP	VF	AREA	DEPTH	THICK	WIDTH	FLANGE	THICK	THICK								
3X 2X	.125/ .188T	2.55	8.5	1.6	4.8	1.0	.6	3.0	.75	3.19	.125	2.00		.125	.188								
4X 2X	.125/ .188T	2.99	11.9	2.2	8.6	1.3	.7	3.8	.88	4.19	.125	2.00		.125	.188								
3X 2X	.188/ .250T	3.60	9.2	2.1	6.2	1.1	.7	2.9	1.06	3.25	.188	2.00		.188	.250								
3X 2X	.188/ .313T	4.05	9.8	2.5	7.3	1.2	.8	2.9	1.19	3.31	.188	2.00		.188	.313								
3X 3X	.188/ .250T	4.45	10.1	2.9	8.2	1.2	.8	2.8	1.31	3.25	.188	3.00		.188	.250								
4X 2X	.188/ .313T	4.69	13.5	3.5	13.1	1.5	1.0	3.7	1.38	4.31	.188	2.00		.188	.313								
5X 2X	.188/ .250T	4.90	16.4	4.8	18.1	1.8	1.1	4.5	1.44	5.25	.188	2.00		.188	.250								
5X 2X	.188/ .313T	5.30	17.2	4.6	20.6	1.9	1.2	4.5	1.56	5.31	.188	2.00		.188	.313								
6X 2X	.188/ .313T	5.95	21.0	5.8	30.5	2.3	1.5	5.2	1.75	6.31	.188	2.00		.188	.313								
6X 3X	.188/ .250T	6.39	21.5	6.6	33.5	2.3	1.6	5.1	1.88	6.25	.188	3.00		.188	.250								
4X 4X	.188/ .313T	6.88	15.3	6.8	20.2	1.8	1.3	3.4	2.08	6.31	.188	4.00		.188	.313								
6X 3X	.188/ .313T	7.00	22.4	7.6	38.1	2.5	1.7	5.0	2.06	6.31	.188	3.00		.188	.313								
5X 4X	.188/ .313T	7.45	19.2	7.7	31.3	2.2	1.6	4.1	2.19	5.31	.188	4.00		.188	.313								
8X 4X	.188/ .313T	8.89	23.3	9.5	45.1	2.6	1.9	4.7	2.38	6.31	.188	4.00		.188	.313								
5X 3X	.250/ .438T	8.78	19.6	8.3	33.9	2.2	1.7	4.1	2.56	5.44	.250	3.00		.250	.438								
7X 3X	.250/ .313T	9.15	26.3	10.0	55.9	2.8	2.1	5.6	2.69	7.31	.250	3.00		.250	.313								
6X 3X	.250/ .438T	9.55	23.7	10.3	48.9	2.6	2.1	4.8	2.81	6.44	.250	3.00		.250	.438								
7X 3X	.250/ .375T	9.79	27.1	11.2	61.5	2.9	2.3	5.5	2.88	7.38	.250	3.00		.250	.375								
8X 3X	.250/ .313T	10.00	30.4	12.8	74.5	3.2	2.5	6.2	2.94	8.31	.250	3.00		.250	.313								
7X 4X	.250/ .313T	10.20	27.4	12.1	64.5	3.0	2.4	5.3	3.00	7.31	.250	4.00		.250	.313								
7X 3X	.250/ .438T	10.40	27.8	12.4	66.9	3.0	2.4	5.4	3.06	7.44	.250	3.00		.250	.438								
8X 3X	.250/ .375T	10.64	31.2	13.3	81.7	3.3	2.6	6.1	3.13	8.38	.250	3.00		.250	.375								
8X 4X	.250/ .313T	11.05	31.6	14.3	85.5	3.4	2.7	6.0	3.25	8.31	.250	4.00		.250	.313								
8X 3X	.250/ .438T	11.25	32.0	14.6	88.5	3.4	2.8	6.1	3.31	8.44	.250	3.00		.250	.438								
6X 5X	.250/ .375T	11.49	24.7	13.6	59.2	2.8	2.4	4.4	3.38	6.38	.250	5.00		.250	.375								
8X 4X	.250/ .375T	11.90	32.5	16.1	94.1	3.5	2.9	5.9	3.50	8.38	.250	4.00		.250	.375								
7X 5X	.250/ .375T	12.34	29.1	16.2	80.7	3.2	2.8	5.0	3.63	7.38	.250	5.00		.250	.375								
6X 5X	.250/ .438T	12.55	25.3	15.3	65.0	2.9	2.6	4.2	3.69	6.44	.250	5.00		.250	.438								
8X 4X	.250/ .438T	12.75	33.3	17.9	102.6	3.6	3.1	5.7	3.75	8.44	.250	4.00		.250	.438								
8X 5X	.250/ .375T	13.19	33.4	18.9	105.9	3.6	3.2	5.6	3.88	8.38	.250	5.00		.250	.375								
7X 5X	.250/ .438T	13.40	29.7	18.2	88.2	3.3	3.0	4.8	3.94	7.44	.250	5.00		.250	.438								
6X 6X	.250/ .438T	14.04	25.8	17.8	71.7	2.9	2.8	4.8	4.13	6.44	.250	6.00		.250	.438								
8X 5X	.250/ .438T	14.25	34.2	21.1	115.1	3.7	3.4	5.4	4.19	8.44	.250	5.00		.250	.438								
9X 4X	.313/ .375T	14.65	37.2	19.7	125.6	3.7	3.4	6.4	4.31	9.38	.313	4.00		.313	.375								
7X 6X	.250/ .438T	14.89	30.3	21.8	97.0	3.4	3.2	4.6	4.38	7.44	.250	6.00		.250	.438								
9X 4X	.313/ .438T	15.50	38.1	21.7	135.6	3.9	3.6	6.3	4.56	9.44	.313	4.00		.313	.438								
10X 4X	.313/ .375T	15.74	41.6	22.6	157.5	4.2	3.8	7.0	4.63	10.38	.313	4.00		.313	.375								
8X 6X	.250/ .438T	15.74	34.8	24.4	126.4	3.8	3.6	5.2	4.63	8.44	.250	6.00		.250	.438								
9X 5X	.313/ .375T	15.95	38.3	22.8	139.5	4.0	3.6	6.1	4.69	9.38	.313	5.00		.313	.375								
9X 4X	.313/ .500T	16.35	38.8	23.6	145.1	4.0	3.7	6.1	4.81	9.50	.313	4.00		.313	.500								
10X 4X	.313/ .438T	16.59	42.6	24.8	169.3	4.3	4.0	6.8	4.88	10.44	.313	4.00		.313	.438								
10X 5X	.313/ .375T	17.00	42.9	26.0	174.2	4.3	4.1	6.7	5.00	10.38	.313	5.00		.313	.375								
9X 4X	.313/ .563T	17.20	39.6	25.6	154.6	4.1	3.9	6.0	5.06	9.56	.313	4.00		.313	.563								
10X 4X	.313/ .500T	17.44	43.5	27.0	181.0	4.4	4.2	6.7	5.13	10.50	.313	4.00		.313	.500								
10X 5X	.313/ .438T	18.05	43.9	28.7	187.7	4.4	4.3	6.5	5.31	10.44	.313	5.00		.313	.438								

0.3750 - 3/8 in.



.375 IN. PLATE (AREA= 4.22 SQ.IN.)

SECTION MODULUS				***** BEAM DIMENSIONS *****				SHEAR AREA				
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WIDTH	FLANGE THICK	AREA
10X 4X .313/.563T	18.29	44.3	29.1	192.0	4.5	4.3	6.6	10.56	.313	4.00	.563	3.42
9X 6X .313/.438T	18.50	40.1	28.9	164.7	4.1	4.1	5.7	9.44	.313	6.00	.438	3.07
10X 5X .313/.500T	19.14	44.8	31.4	200.7	4.5	4.5	6.4	10.50	.313	5.00	.500	3.40
7X 7X .313/.500T	19.35	31.7	27.1	115.1	3.4	3.6	4.2	7.50	.313	7.00	.500	2.46
10X 6X .313/.438T	19.55	44.9	32.6	204.3	4.5	4.6	6.3	10.44	.313	6.00	.438	3.39
9X 6X .313/.500T	19.75	40.8	31.8	176.4	4.2	4.3	5.6	9.50	.313	6.00	.500	3.09
10X 5X .313/.563T	20.20	45.5	34.1	213.2	4.6	4.7	6.3	10.56	.313	5.00	.563	3.42
7X 7X .313/.563T	20.84	32.2	29.7	122.7	3.4	3.8	4.1	7.56	.313	7.00	.563	2.48
10X 6X .313/.500T	20.84	45.7	35.9	218.7	4.6	4.8	6.1	10.50	.313	6.00	.500	3.40
9X 7X .313/.500T	21.45	41.5	35.8	189.6	4.2	4.6	5.3	9.50	.313	7.00	.500	3.09
12X 4X .375/.469T	21.69	53.6	34.3	268.8	5.0	5.0	7.8	12.47	.375	4.00	.469	4.82
8X 7X .313/.563T	21.90	37.1	34.5	159.7	3.9	4.3	4.6	8.56	.313	7.00	.563	2.88
10X 6X .313/.563T	22.10	46.5	39.1	232.2	4.7	5.0	5.9	10.56	.313	6.00	.563	3.42
10X 7X .313/.500T	22.54	46.5	40.3	234.9	4.7	5.1	5.8	10.50	.313	7.00	.500	3.40
12X 4X .375/.531T	22.54	54.6	36.8	264.0	5.1	5.2	7.7	12.53	.375	4.00	.531	4.84
12X 5X .375/.469T	23.26	55.2	39.3	294.9	5.2	5.3	7.5	12.47	.375	5.00	.469	4.82
12X 4X .375/.594T	23.39	55.6	39.4	298.8	5.2	5.4	7.6	12.59	.375	4.00	.594	4.86
7X 7X .375/.625T	23.80	33.1	32.7	131.7	3.4	4.0	4.0	7.63	.375	7.00	.625	3.00
10X 7X .313/.563T	24.00	47.2	44.0	249.2	4.7	5.3	5.7	10.56	.313	7.00	.563	3.42
12X 4X .375/.656T	24.24	56.5	41.7	312.8	5.3	5.5	7.5	12.66	.375	4.00	.656	4.89
12X 5X .375/.531T	24.34	56.3	42.4	312.2	5.2	5.5	7.4	12.53	.375	5.00	.531	4.84
9X 8X .313/.563T	24.85	42.7	43.7	214.4	4.3	5.0	4.9	9.56	.313	8.00	.563	3.11
12X 6X .375/.469T	24.85	56.6	44.2	318.6	5.3	5.6	7.2	12.47	.375	6.00	.469	4.82
12X 5X .375/.594T	25.40	57.2	45.5	328.5	5.3	5.7	7.2	12.59	.375	5.00	.594	4.86
10X 8X .313/.563T	25.94	47.9	43.1	265.1	4.7	5.5	5.4	10.56	.313	8.00	.563	3.42
12X 6X .375/.531T	26.15	57.6	48.0	337.7	5.3	5.9	7.0	12.53	.375	6.00	.531	4.84
12X 5X .375/.656T	26.45	58.1	48.5	344.8	5.4	5.9	7.1	12.66	.375	5.00	.656	4.89
12X 7X .375/.469T	26.45	57.7	49.1	340.5	5.3	5.9	6.9	12.47	.375	7.00	.469	4.82
7X 7X .438/.688T	26.79	34.1	35.6	140.5	3.4	4.1	3.9	7.69	.438	7.00	.688	3.53
12X 6X .375/.594T	27.40	58.6	51.6	355.6	5.4	6.1	6.9	12.59	.375	6.00	.594	4.86
12X 7X .375/.531T	27.95	58.7	53.5	361.3	5.4	6.2	6.8	12.53	.375	7.00	.531	4.84
7X 7X .438/.750T	28.25	34.6	38.1	147.3	3.4	4.3	3.9	7.75	.438	7.00	.750	3.56
12X 6X .375/.656T	28.70	59.4	55.2	373.1	5.4	6.3	6.8	12.66	.375	6.00	.656	4.89
12X 7X .375/.594T	29.44	59.6	57.7	380.3	5.4	6.4	6.6	12.59	.375	7.00	.594	4.86
14X 5X .438/.531T	29.85	68.8	53.6	449.1	5.9	6.5	8.4	14.53	.438	5.00	.531	6.53
14X 5X .438/.594T	30.91	70.0	57.1	478.4	5.9	6.7	8.2	14.59	.438	5.00	.594	6.55
12X 7X .375/.656T	30.91	60.5	62.0	399.2	5.5	6.6	6.4	12.66	.375	7.00	.656	4.89
12X 8X .375/.594T	31.45	60.5	63.8	402.8	5.5	6.7	6.3	12.59	.375	8.00	.594	4.86
14X 6X .438/.531T	31.65	70.5	59.9	482.7	6.0	6.8	8.1	14.53	.438	6.00	.531	6.53
14X 5X .438/.656T	31.99	71.1	68.6	491.7	6.0	6.9	8.1	14.66	.438	5.00	.656	6.59
7X 7X .508/.875T	32.74	36.0	43.1	161.9	3.4	4.5	3.8	9.63	.508	7.00	.875	4.13
14X 6X .438/.594T	32.95	71.7	64.1	506.3	6.0	7.1	7.9	14.59	.438	6.00	.594	6.55
14X 5X .438/.719T	33.05	72.1	64.0	511.7	6.1	7.1	8.0	14.72	.438	5.00	.719	6.61
12X 8X .375/.656T	33.15	61.4	68.7	422.5	5.5	6.9	6.1	12.66	.375	8.00	.656	4.89
7X 6X .563/1.000T	33.80	36.9	42.3	165.1	3.4	4.5	3.9	8.00	.563	6.00	1.000	4.72

0.3750 - 3/8 in.

0.375 IN. PLATE (AREA= 4.22 SQ.IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR AREA	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WIDTH	FLANGE	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK
14X 6X .438/.656T	34.20	72.8	68.2	529.6	6.1	7.3	7.8	10.06	14.66	.438	6.00	.656	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 7X .438/.594T	34.95	73.1	71.1	539.5	6.1	7.4	7.6	10.28	14.59	.438	7.00	.594	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 8X .438/.556T	35.39	73.1	75.3	443.6	5.5	7.1	5.9	10.41	12.66	.375	9.00	.556	.375	.375	.375	.375	.375	.375	.375	.375	.375
14X 6X .438/.719T	35.50	73.8	72.4	551.6	6.1	7.5	7.6	10.44	14.72	.438	6.00	.719	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 7X .438/.656T	36.45	74.2	75.9	564.1	6.1	7.6	7.4	10.72	14.66	.438	7.00	.656	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 8X .438/.594T	36.99	74.4	78.1	570.0	6.1	7.7	7.3	10.88	14.59	.438	8.00	.594	.438	.438	.438	.438	.438	.438	.438	.438	.438
7X 7X .563/1.000T	37.20	37.5	47.8	175.9	3.4	4.7	3.7	10.94	8.00	.563	7.00	1.000	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 5X .500/.594T	37.30	84.4	70.5	651.8	6.6	7.7	9.2	10.97	16.59	.500	5.00	.594	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 7X .438/.719T	37.94	75.3	80.7	588.0	6.2	7.8	7.3	11.16	14.72	.438	7.00	.719	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 8X .438/.656T	38.35	85.7	74.3	677.7	6.6	7.9	9.1	11.28	16.66	.500	5.00	.656	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 6X .500/.594T	38.69	75.4	83.5	595.8	6.2	7.9	7.1	11.38	14.66	.438	8.00	.594	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 7X .500/.719T	39.30	86.5	78.3	697.6	6.6	8.1	8.9	11.56	16.59	.500	6.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 8X .438/.719T	39.41	87.0	81.8	703.4	6.7	8.1	9.0	11.59	16.72	.500	5.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 6X .500/.594T	39.85	64.5	81.8	472.3	5.4	7.3	5.8	11.72	12.72	.438	9.00	.594	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 7X .438/.719T	40.39	76.4	88.9	620.6	6.2	8.1	7.0	11.88	14.72	.438	8.00	.719	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 8X .438/.656T	40.60	87.9	82.9	726.8	6.7	8.3	8.8	11.94	16.66	.500	6.00	.656	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 6X .500/.594T	41.34	88.4	86.1	748.0	6.7	8.4	8.6	12.16	16.59	.500	7.00	.594	.500	.500	.500	.500	.500	.500	.500	.500	.500
7X 7X .625/1.125T	41.65	38.9	52.2	189.6	3.4	4.9	3.6	12.25	8.13	.625	7.00	1.125	.625	.625	.625	.625	.625	.625	.625	.625	.625
14X 6X .500/.719T	41.85	89.2	87.5	755.1	6.8	8.5	8.6	12.31	16.72	.500	6.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 7X .500/.875T	42.09	89.8	87.5	764.8	6.8	8.5	8.7	12.38	16.88	.500	5.00	.875	.500	.500	.500	.500	.500	.500	.500	.500	.500
12X10X .438/.719T	42.30	65.2	89.0	492.8	5.4	7.6	5.5	12.44	12.72	.438	10.00	.719	.438	.438	.438	.438	.438	.438	.438	.438	.438
14X 9X .438/.719T	42.81	89.7	91.4	771.6	6.8	8.6	8.4	12.59	16.66	.500	7.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 6X .500/.875T	44.30	91.0	96.9	802.2	6.8	8.8	8.3	13.03	16.72	.500	7.00	.875	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 7X .500/.719T	45.05	92.0	98.7	822.0	6.9	8.9	8.3	13.25	16.88	.500	6.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 8X .500/.656T	45.05	91.3	99.9	813.0	6.8	8.9	8.1	13.25	16.66	.500	8.00	.656	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X10X .438/.719T	45.25	78.3	105.4	678.3	6.2	8.7	6.4	13.31	14.72	.438	10.00	.719	.438	.438	.438	.438	.438	.438	.438	.438	.438
7X 7X .688/1.250T	46.10	40.4	56.5	203.3	3.4	5.0	3.6	13.56	8.25	.688	7.00	1.250	.688	.688	.688	.688	.688	.688	.688	.688	.688
14X 8X .500/.719T	46.75	92.6	106.2	845.7	6.9	9.1	8.0	13.75	16.72	.500	8.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 9X .500/.656T	47.29	92.7	108.5	851.8	6.9	9.2	7.8	13.91	16.66	.500	9.00	.656	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 6X .563/.656T	47.80	104.9	99.4	971.9	7.3	9.3	9.8	14.06	18.66	.563	6.00	.656	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 7X .500/.875T	48.04	93.9	110.0	874.1	6.9	9.3	7.9	14.13	16.88	.500	7.00	.875	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 8X .563/.719T	49.10	106.5	104.6	1007.7	7.3	9.5	9.6	14.44	18.72	.563	6.00	.719	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 9X .500/.719T	49.26	94.0	115.4	885.6	6.9	9.4	7.7	14.47	16.72	.500	9.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 8X .500/.875T	51.00	95.4	121.2	921.2	6.9	9.7	7.6	15.00	16.88	.500	8.00	.875	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 7X .563/.719T	51.54	108.8	114.9	1067.2	7.4	9.8	9.3	15.16	18.72	.563	7.00	.719	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X10X .500/.719T	51.65	95.2	124.7	922.9	6.9	9.7	7.4	15.19	16.72	.500	10.00	.719	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 8X .563/.656T	52.29	109.2	118.4	1081.6	7.4	9.9	9.1	15.38	18.66	.563	8.00	.656	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X10X .500/.875T	53.55	83.0	123.1	756.3	6.2	9.1	6.1	15.75	14.88	.500	10.00	.875	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 9X .500/.875T	53.99	96.8	132.3	964.4	6.9	10.0	7.3	15.88	16.88	.500	9.00	.875	.500	.500	.500	.500	.500	.500	.500	.500	.500
14X 8X .563/.719T	53.99	110.8	125.1	1122.2	7.5	10.1	9.0	16.03	18.72	.563	8.00	.719	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 9X .563/.656T	54.50	111.0	127.8	1130.8	7.5	10.2	8.9	16.03	18.66	.563	9.00	.656	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 6X .563/1.000T	54.84	112.5	126.8	1154.8	7.5	10.3	9.1	16.13	19.00	.563	6.00	1.000	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 7X .563/.875T	55.25	112.3	129.4	1158.0	7.5	10.3	8.9	16.25	18.88	.563	7.00	.875	.563	.563	.563	.563	.563	.563	.563	.563	.563
14X 8X .563/.719T	56.41	112.6	135.3	1173.7	7.5	10.4	8.7	16.59	18.72	.563	9.00	.719	.563	.563	.563	.563	.563	.563	.563	.563	.563

0.3750 - 3/8 in.



0.375 IN. PLATE (AREA= 4.22 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X10X .500/ .075T	58.35	97.9	143.3	1003.6	6.9	10.3	7.0	16.75	16.00	.500	10.00	.075	8.63
18X10X .563/ .075T	58.85	114.2	145.6	1222.1	7.5	10.7	8.4	17.31	18.72	.563	10.00	.075	10.75
18X8X .563/ .075T	61.64	116.8	154.8	1289.9	7.6	11.0	8.3	18.13	19.80	.563	8.00	1.000	10.91
18X11X .563/ .075T	67.15	119.0	170.3	1374.4	7.6	11.5	7.7	19.75	18.00	.563	11.00	.075	10.84
18X10X .563/ .075T	68.44	120.1	182.4	1403.0	7.6	11.7	7.7	20.13	19.00	.563	10.00	1.000	10.91
18X12X .563/ .075T	70.14	120.2	190.3	1418.4	7.6	11.8	7.5	20.63	18.00	.563	12.00	.075	10.84
18X9X .625/ .125T	72.69	125.0	185.1	1455.2	7.5	11.6	7.9	21.38	19.13	.625	9.00	1.125	12.19
21X9X .688/ .075T	75.85	152.3	192.4	1891.6	8.4	12.4	9.8	22.31	21.00	.688	9.00	.075	15.31
21X10X .688/ .075T	78.85	154.6	206.3	1966.6	8.5	12.7	9.5	23.19	21.00	.688	10.00	.075	15.31
21X8X .688/ .075T	79.70	156.3	207.9	2007.8	8.5	12.8	9.7	23.44	22.13	.688	8.00	1.125	15.48
21X11X .688/ .075T	81.80	156.6	220.3	2036.9	8.5	13.0	9.2	24.06	21.00	.688	11.00	.075	15.31
21X9X .688/ .075T	83.50	158.9	225.4	2097.1	8.5	13.2	9.3	24.56	22.13	.688	9.00	1.125	15.48
21X12X .688/ .075T	84.80	158.5	234.1	2103.0	8.5	13.3	9.0	24.94	21.00	.688	12.00	.075	15.31
21X10X .688/ .125T	87.35	161.1	242.7	2179.3	8.5	13.5	9.0	25.69	22.13	.688	10.00	1.125	15.48
21X13X .688/ .075T	87.75	160.1	247.7	2164.5	8.5	13.5	8.7	25.81	21.00	.688	13.00	.075	15.31
24X10X .750/ .075T	90.95	192.4	248.4	2738.6	9.4	14.2	11.0	26.75	24.00	.750	10.00	.075	18.94
24X8X .750/ .125T	91.80	194.4	250.2	2730.5	9.5	14.4	11.2	27.00	25.13	.750	8.00	1.125	19.13
24X11X .750/ .075T	93.94	195.2	263.9	2833.4	9.4	14.5	10.7	27.63	24.00	.750	11.00	.075	18.94
24X9X .750/ .125T	95.64	197.9	269.9	2911.8	9.5	14.7	10.8	28.13	25.13	.750	9.00	1.125	19.13
24X12X .750/ .075T	96.90	197.6	279.5	2923.7	9.5	14.8	10.5	28.50	24.00	.750	12.00	.075	18.94
24X10X .750/ .125T	99.45	200.9	299.7	3025.6	9.5	15.1	10.4	29.25	25.13	.750	10.00	1.125	19.13
24X13X .750/ .075T	99.89	199.9	295.2	3010.1	9.5	15.1	10.2	29.38	24.00	.750	13.00	.075	18.94
21X14X .688/ .125T	102.65	168.0	311.9	2456.7	8.4	14.6	7.9	30.19	22.13	.688	14.00	1.125	15.48
21X15X .688/ .125T	106.45	169.3	328.9	2515.0	8.4	14.9	7.6	31.31	22.13	.688	15.00	1.125	15.48
24X12X .750/ .125T	107.10	206.1	328.9	3231.2	9.5	15.7	9.8	31.50	25.13	.750	12.00	1.125	19.13
24X13X .750/ .125T	110.94	208.3	348.5	3325.0	9.5	16.0	9.5	32.63	25.13	.750	13.00	1.125	19.13
27X9X .875/ .1500T	126.24	264.5	385.8	4530.8	10.5	17.1	11.7	37.13	28.50	.875	9.00	1.500	25.27
27X10X .875/ .1375T	127.09	264.4	392.3	4542.1	10.4	17.2	11.6	37.38	28.38	.875	10.00	1.375	25.16
27X13X .875/ .125T	130.05	265.2	413.2	4604.6	10.4	17.4	11.1	38.25	28.13	.875	13.00	1.125	24.94
27X10X .875/ .1500T	131.34	268.7	414.2	4705.8	10.5	17.5	11.4	38.63	28.50	.875	10.00	1.500	25.27
27X11X .875/ .1375T	131.75	268.2	418.6	4700.3	10.5	17.5	11.2	38.75	28.38	.875	11.00	1.375	25.16
27X14X .875/ .125T	133.89	268.1	435.0	4727.7	10.4	17.6	10.9	39.38	28.13	.875	14.00	1.125	24.94
27X15X .875/ .125T	137.70	270.7	456.3	4843.6	10.4	17.9	10.6	40.50	28.13	.875	15.00	1.125	24.94
27X13X .875/ .1500T	146.64	278.9	498.9	5165.0	10.4	18.5	10.4	43.13	28.50	.875	13.00	1.500	25.27
30X10X1.000/ .1375T	148.75	330.7	463.7	6129.8	11.3	18.5	13.2	43.75	31.38	1.000	10.00	1.375	31.76
30X10X1.000/ .1500T	153.00	336.2	488.0	6344.5	11.4	18.9	13.0	45.00	31.50	1.000	10.00	1.500	31.88
30X11X1.000/ .1375T	153.44	335.7	492.7	6340.1	11.3	18.9	12.9	45.13	31.38	1.000	11.00	1.375	31.76
30X10X1.000/ .1750T	161.50	346.2	535.4	6754.8	11.4	19.5	12.6	47.50	34.75	1.000	10.00	1.750	32.13

0.3750 - 3/8 in.

0.438 IN. PLATE (AREA= 5.74 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	THICK	
3X 2X .125/.100T	2.55	10.0	1.6	5.1	.9	.5	3.1	.75	3.19	.125	2.00	.188	.45
4X 2X .125/.100T	2.59	14.4	2.3	9.1	1.2	.6	4.0	.88	4.19	.125	2.00	.188	.58
3X 2X .188/.250T	3.60	11.1	2.2	6.7	1.0	.6	3.1	1.06	3.25	.188	2.00	.250	.69
3X 2X .188/.313T	4.05	11.9	2.6	7.9	1.1	.7	3.1	1.19	3.31	.188	2.00	.313	.70
3X 3X .188/.250T	4.45	12.5	3.0	8.9	1.1	.7	3.0	1.31	3.25	.188	3.00	.250	.69
4X 2X .188/.313T	4.69	16.8	3.6	14.1	1.4	.8	3.9	1.30	4.31	.188	2.00	.313	.89
5X 2X .188/.250T	4.90	20.6	4.1	19.5	1.6	.9	4.7	1.44	5.25	.188	2.00	.250	1.07
5X 2X .188/.313T	5.30	21.6	4.7	22.2	1.7	1.0	4.7	1.56	5.31	.188	2.00	.313	1.08
6X 2X .188/.313T	5.95	26.6	6.0	32.9	2.1	1.2	5.5	1.75	6.31	.188	2.00	.313	1.27
6X 3X .188/.250T	6.39	27.4	6.7	36.2	2.2	1.3	5.4	1.88	6.25	.188	3.00	.250	1.26
4X 4X .188/.313T	6.80	19.4	6.2	22.2	1.7	1.1	3.6	2.00	4.31	.188	4.00	.313	.89
6X 3X .188/.313T	7.00	28.6	7.8	41.4	2.3	1.4	5.3	2.06	6.31	.188	3.00	.313	1.27
5X 4X .188/.313T	7.45	24.7	7.9	34.3	2.1	1.4	4.4	2.19	5.31	.188	4.00	.313	1.08
6X 4X .188/.313T	8.09	30.0	9.7	49.4	2.5	1.6	5.1	2.38	6.31	.188	4.00	.313	1.27
7X 3X .250/.438T	8.70	25.2	8.5	37.4	2.1	1.5	4.4	2.56	5.44	.250	3.00	.438	1.47
9.15	33.7	10.3	10.3	61.2	2.7	1.8	5.9	2.69	7.31	.250	3.00	.313	1.94
5X 3X .250/.438T	9.55	30.5	10.6	53.9	2.5	1.8	5.1	2.81	6.44	.250	3.00	.438	1.72
7X 3X .250/.375T	9.79	34.8	11.5	67.6	2.8	1.9	5.9	2.88	7.38	.250	3.00	.375	1.95
8X 3X .250/.313T	10.00	38.9	12.3	81.7	3.1	2.1	6.6	2.94	8.31	.250	3.00	.313	2.19
10.20	35.2	12.4	12.4	71.1	2.9	2.0	5.7	3.00	7.31	.250	4.00	.313	1.94
7X 4X .250/.313T	10.40	35.8	12.7	73.9	2.9	2.2	5.8	3.06	7.44	.250	3.00	.438	1.97
8X 3X .250/.438T	10.64	40.1	13.7	89.9	3.2	2.2	6.6	3.13	8.38	.250	3.00	.375	2.20
8X 4X .250/.313T	11.05	40.6	14.7	94.4	3.2	2.3	6.4	3.25	8.31	.250	4.00	.313	2.19
11.25	41.2	15.0	15.0	97.7	3.3	2.4	6.5	3.31	8.44	.250	3.00	.438	2.22
6X 5X .250/.375T	11.49	31.9	13.9	66.0	2.7	2.1	4.8	3.38	6.38	.250	5.00	.375	1.70
11.90	41.8	16.5	16.5	104.3	3.4	2.5	6.3	3.50	8.38	.250	4.00	.375	2.20
7X 5X .250/.375T	12.34	37.5	16.6	90.1	3.1	2.4	5.4	3.63	7.38	.250	5.00	.375	1.95
6X 5X .250/.438T	12.55	32.8	15.7	73.0	2.8	2.2	4.7	3.69	6.44	.250	5.00	.438	1.72
12.75	42.9	18.4	18.4	114.3	3.5	2.7	6.2	3.75	8.44	.250	4.00	.438	2.22
8X 5X .250/.375T	13.19	43.2	19.4	118.2	3.5	2.7	6.1	3.88	8.38	.250	5.00	.375	2.20
7X 5X .250/.438T	13.40	38.5	18.7	99.0	3.2	2.6	5.3	3.94	7.44	.250	5.00	.438	1.97
14.04	33.5	18.2	18.2	81.2	2.9	2.4	4.5	4.13	6.44	.250	6.00	.438	1.72
8X 5X .250/.438T	14.25	44.1	21.7	129.2	3.6	2.9	6.0	4.19	8.44	.250	5.00	.438	2.22
9X 4X .313/.375T	14.65	47.5	20.3	139.8	3.7	2.9	6.9	4.31	9.38	.313	4.00	.375	3.07
14.89	39.3	21.6	21.6	109.7	3.3	2.8	5.1	4.38	7.44	.250	6.00	.438	1.97
9X 4X .250/.438T	15.50	48.7	22.4	151.4	3.8	3.1	6.8	4.56	9.44	.313	4.00	.438	3.09
10X 4X .313/.375T	15.74	53.2	23.3	175.4	4.1	3.3	7.5	4.63	10.38	.313	4.00	.375	3.39
8X 6X .250/.438T	15.74	45.1	25.0	142.9	3.7	3.2	5.7	4.63	8.44	.250	6.00	.438	2.22
15.95	49.0	23.6	23.6	156.2	3.9	3.2	6.6	4.69	9.38	.313	5.00	.375	3.07
9X 5X .313/.375T	16.35	49.8	24.4	162.6	3.9	3.3	6.7	4.81	9.50	.313	4.00	.500	3.11
10X 4X .313/.438T	16.59	54.5	25.6	195.0	4.2	3.5	7.4	4.88	10.44	.313	4.00	.438	3.40
10X 5X .313/.375T	17.00	54.9	26.9	195.0	4.2	3.6	7.3	5.00	10.38	.313	5.00	.375	3.39
9X 4X .313/.563T	17.20	50.7	26.5	173.9	4.0	3.4	6.6	5.06	9.56	.313	4.00	.563	3.13
10X 4X .313/.500T	17.44	55.6	27.8	202.9	4.3	3.6	7.3	5.13	10.50	.313	4.00	.500	3.42
10X 5X .313/.438T	18.05	56.1	29.6	211.0	4.4	3.6	7.1	5.31	10.44	.313	5.00	.438	3.40

0.4375 - 7/16 in.



436 IN. PLATE (AREA= 5.74 SQ. IN.)

SECTION MODULUS		***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	AREA
10X 4X .313/.563T	18.29	56.7	30.1	216.0	4.4	3.8	7.2	5.38	10.56	.313	4.00	.563	3.44
10X 6X .313/.563T	18.50	51.4	29.8	186.2	4.1	3.6	6.3	5.44	9.44	.313	6.00	.438	3.09
10X 5X .313/.500T	19.14	57.3	32.4	226.5	4.5	4.0	7.0	5.63	10.50	.313	5.00	.508	3.42
7X 7X .313/.500T	19.35	41.0	27.9	131.9	3.4	3.2	4.7	5.69	7.50	.313	7.00	.508	2.48
10X 6X .313/.563T	19.55	57.4	33.7	230.9	4.5	4.0	6.9	5.75	10.44	.313	6.00	.438	3.40
9X 6X .313/.500T	19.75	52.4	32.8	200.3	4.2	3.8	6.1	5.81	9.50	.313	6.00	.508	3.11
10X 5X .313/.563T	20.20	58.3	35.2	281.4	4.5	4.1	6.9	5.94	10.56	.313	5.00	.563	3.44
7X 7X .313/.563T	20.84	41.6	30.7	141.3	3.4	3.4	4.6	6.13	7.56	.313	7.00	.563	2.50
10X 6X .313/.500T	20.84	58.5	37.1	288.3	4.6	4.2	6.7	6.13	10.50	.313	6.00	.508	3.42
9X 7X .313/.500T	21.45	53.3	36.9	216.6	4.2	4.1	5.9	6.31	9.50	.313	7.00	.508	3.11
12X 4X .375/.469T	21.69	67.7	35.7	301.4	5.0	4.5	8.5	6.38	12.47	.375	4.00	.469	4.04
8X 7X .313/.563T	21.90	47.9	35.5	183.6	3.9	3.8	5.2	6.44	8.56	.313	7.00	.563	2.82
10X 6X .313/.563T	22.10	59.5	40.4	284.6	4.6	4.4	6.6	6.50	10.56	.313	6.00	.563	3.44
10X 7X .313/.500T	22.54	59.6	41.6	288.1	4.7	4.5	6.4	6.63	10.50	.313	7.00	.508	3.42
12X 4X .375/.531T	22.54	69.0	38.3	319.2	5.1	4.6	8.3	6.63	12.53	.375	4.00	.531	4.86
12X 5X .375/.469T	23.26	69.7	40.8	332.1	5.1	4.8	8.1	6.84	12.47	.375	5.00	.469	4.84
12X 4X .375/.594T	23.39	70.2	40.9	336.6	5.2	4.8	8.2	6.88	12.50	.375	4.00	.594	4.89
7X 7X .375/.625T	23.88	42.6	33.8	152.1	3.5	3.6	4.5	7.00	7.63	.375	7.00	.625	3.83
10X 7X .313/.563T	24.00	60.5	45.5	285.6	4.7	4.7	6.3	7.06	10.56	.313	7.00	.563	3.44
12X 4X .375/.656T	24.24	71.3	43.4	353.0	5.2	5.0	8.1	7.13	12.66	.375	4.00	.656	4.91
12X 5X .375/.531T	24.34	71.0	44.0	352.6	5.2	5.0	8.0	7.16	12.53	.375	5.00	.531	4.86
9X 8X .313/.563T	24.85	54.9	45.1	287.4	4.4	4.5	5.5	7.31	9.56	.313	8.00	.563	3.13
12X 6X .375/.469T	24.85	71.4	45.8	368.3	5.3	5.0	7.9	7.47	12.47	.375	6.00	.469	4.84
12X 5X .375/.594T	25.40	72.2	47.2	371.9	5.3	5.1	7.9	7.47	12.59	.375	5.00	.594	4.89
10X 8X .313/.563T	25.94	61.4	50.7	305.5	4.8	5.0	6.0	7.63	10.56	.313	8.00	.563	3.44
12X 6X .375/.531T	26.15	72.7	49.7	383.1	5.3	5.3	7.7	7.69	12.53	.375	6.00	.531	4.86
12X 5X .375/.656T	26.45	73.4	50.4	381.2	5.4	5.3	7.8	7.78	12.66	.375	5.00	.656	4.91
12X 7X .375/.469T	26.45	72.8	50.9	386.6	5.3	5.3	7.6	7.78	12.47	.375	7.00	.469	4.84
7X 7X .438/.688T	26.79	43.6	37.0	182.7	3.5	3.7	4.4	7.88	7.69	.438	7.00	.688	3.56
12X 6X .375/.594T	27.40	73.9	53.6	484.5	5.4	5.5	7.6	8.06	12.59	.375	6.00	.594	4.89
12X 7X .375/.531T	27.95	74.1	55.5	411.5	5.4	5.6	7.4	8.22	12.53	.375	7.00	.531	4.86
7X 7X .438/.750T	28.25	44.3	39.6	171.1	3.5	3.9	4.3	8.31	7.75	.438	7.00	.750	3.59
12X 6X .375/.656T	28.70	75.0	57.3	425.6	5.5	5.7	7.4	8.44	12.66	.375	6.00	.656	4.91
12X 7X .375/.594T	29.44	75.3	59.9	434.6	5.5	5.8	7.3	8.66	12.59	.375	7.00	.594	4.89
14X 5X .438/.531T	29.85	85.6	55.9	586.0	5.9	5.9	9.1	8.78	14.53	.438	5.00	.531	6.56
14X 5X .438/.594T	30.91	87.0	59.5	530.9	6.0	6.1	8.9	9.09	14.59	.438	5.00	.594	6.58
12X 7X .375/.656T	30.91	76.4	64.4	457.5	5.6	6.0	7.1	9.09	12.66	.375	7.00	.656	4.91
12X 8X .375/.594T	31.45	76.4	66.2	482.2	5.6	6.0	7.0	9.25	12.59	.375	8.00	.594	4.89
14X 6X .438/.531T	31.65	87.7	62.4	585.7	6.0	6.2	8.7	9.31	14.53	.438	6.00	.531	6.56
14X 5X .438/.656T	31.99	88.4	63.1	556.0	6.1	6.3	8.8	9.41	14.66	.438	5.00	.656	6.61
7X 7X .500/.875T	32.74	45.8	45.0	188.9	3.5	4.1	4.2	9.63	7.88	.500	7.00	.875	4.16
14X 6X .438/.594T	32.95	89.1	66.7	573.5	6.1	6.4	8.6	9.69	14.59	.438	6.00	.594	6.58
14X 5X .438/.719T	33.05	89.6	66.7	579.6	6.1	6.5	8.7	9.72	14.72	.438	5.00	.719	6.64
12X 8X .375/.656T	33.15	77.5	71.3	486.3	5.6	6.3	6.8	9.75	12.66	.375	8.00	.656	4.91
7X 6X .563/1.000T	33.80	46.7	44.3	191.8	3.5	4.1	4.3	9.94	8.00	.563	6.00	1.000	4.75

0.4375 - 7/16 in.

\*\*\*\*\* BEAM DIMENSIONS \*\*\*\*\*

0.4375 - 7/16 in.



430 IN. PLATE (AREA= 5.74 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YP	VF	AREA	DEPTH	DIMENSIONS		SHEAR AREA	
	WT/FT	ZPL	ZFL							WEB THICK	WIDTH		FLANGE THICK
16X10X .500/.875T	56.95	119.6	149.6	1150.8	7.2	9.6	7.7	16.75	16.88	.500	10.00	.875	8.66
18X10X .563/.719T	58.85	137.4	152.0	1382.9	7.7	10.1	9.1	17.31	18.72	.563	10.00	.719	10.79
18X 8X .563/1.000T	61.64	140.5	161.8	1461.6	7.8	10.4	9.0	18.13	19.00	.563	8.00	1.000	10.94
18X11X .563/.875T	67.15	143.1	186.2	1563.1	7.8	10.9	8.4	19.75	18.88	.563	11.00	.875	10.86
18X10X .563/1.000T	68.44	144.3	190.6	1596.4	7.9	11.1	8.4	20.13	19.00	.563	10.80	1.000	10.94
18X12X .563/.875T	70.14	144.5	198.7	1616.0	7.8	11.2	8.1	20.63	18.88	.563	12.00	.875	10.88
18X 9X .625/1.125T	72.69	149.0	193.6	1647.8	7.8	11.1	8.5	21.38	19.13	.625	9.00	1.125	12.23
21X 9X .688/.875T	75.85	178.7	201.0	2111.4	8.7	11.8	10.5	22.31	21.88	.688	9.00	.875	15.35
21X10X .688/.875T	78.85	181.3	215.5	2197.8	8.7	12.1	10.2	23.19	21.88	.688	10.00	.875	15.35
21X 8X .688/1.125T	79.70	183.3	217.3	2243.5	8.8	12.2	10.3	23.44	22.13	.688	8.00	1.125	15.53
21X11X .688/.875T	81.80	183.7	230.0	2278.9	8.7	12.4	9.9	24.06	21.88	.688	11.00	.875	15.35
21X 9X .688/1.125T	83.50	186.2	235.5	2346.5	8.8	12.6	10.0	24.56	22.13	.688	9.00	1.125	15.53
21X12X .688/.875T	84.80	185.8	244.4	2353.3	8.8	12.7	9.6	24.94	21.88	.688	12.00	.875	15.35
21X10X .688/1.125T	87.35	188.8	253.5	2441.8	8.8	12.9	9.6	25.69	22.13	.688	10.00	1.125	15.53
21X13X .688/.875T	87.75	187.7	258.5	2426.6	8.8	12.9	9.4	25.81	21.88	.688	13.00	.875	15.35
24X10X .750/.875T	90.95	222.3	259.2	3029.8	9.7	13.6	11.7	26.75	24.88	.750	10.00	.875	18.99
24X 8X .750/1.125T	91.80	224.5	261.2	3086.8	9.7	13.7	11.8	27.00	25.13	.750	8.00	1.125	19.18
24X11X .750/.875T	93.94	225.3	275.2	3136.9	9.7	13.9	11.4	27.63	24.88	.750	11.00	.875	18.99
24X 9X .750/1.125T	95.64	228.3	281.6	3223.9	9.8	14.1	11.4	28.13	25.13	.750	9.00	1.125	19.18
24X12X .750/.875T	96.90	228.1	291.4	3239.3	9.7	14.2	11.1	28.50	24.88	.750	12.00	.875	18.99
24X10X .750/1.125T	99.45	231.7	302.1	3353.0	9.8	14.5	11.1	29.25	25.13	.750	10.00	1.125	19.18
24X13X .750/.875T	99.89	230.6	307.7	3337.6	9.7	14.5	10.8	29.38	24.88	.750	13.00	.875	18.99
21X14X .688/1.125T	102.65	196.5	325.6	2765.9	8.8	14.1	8.5	30.19	22.13	.688	14.00	1.125	15.53
21X15X .688/1.125T	106.45	198.0	343.4	2834.5	8.7	14.3	8.3	31.31	22.13	.688	15.00	1.125	15.53
24X12X .750/1.125T	107.10	237.5	342.8	3587.2	9.8	15.1	10.5	31.50	25.13	.750	12.00	1.125	19.18
24X13X .750/1.125T	110.94	240.0	363.3	3694.7	9.8	15.4	10.2	32.63	25.13	.750	13.00	1.125	19.18
27X 9X .875/1.500T	126.24	299.0	401.5	4958.5	10.8	16.6	12.4	37.13	28.50	.875	9.00	1.500	25.32
27X10X .875/1.375T	127.09	298.9	408.2	4972.2	10.7	16.6	12.2	37.38	28.38	.875	10.00	1.375	25.22
27X13X .875/1.125T	130.05	299.8	429.6	5044.3	10.7	16.8	11.7	38.25	28.13	.875	13.00	1.125	25.80
27X10X .875/1.500T	131.34	303.6	430.9	5153.4	10.8	17.0	12.0	38.63	28.50	.875	10.00	1.500	25.32
27X11X .875/1.375T	131.75	303.0	435.4	5148.7	10.8	17.0	11.8	38.75	28.38	.875	11.00	1.375	25.22
27X14X .875/1.125T	133.89	302.9	452.1	5181.9	10.7	17.1	11.5	39.38	28.13	.875	14.00	1.125	25.80
27X15X .875/1.125T	137.70	305.9	474.2	5311.4	10.7	17.4	11.2	40.50	28.13	.875	15.00	1.125	25.80
27X13X .875/1.500T	146.64	314.7	518.6	5667.5	10.8	18.0	10.9	43.13	28.50	.875	13.00	1.500	25.32
30X10X1.000/1.375T	148.75	367.9	481.1	6633.3	11.6	18.0	13.8	43.75	31.38	1.000	10.00	1.375	31.82
30X10X1.000/1.500T	153.00	373.8	506.2	6867.0	11.6	18.4	13.6	45.00	31.50	1.000	10.00	1.500	31.94
30X11X1.000/1.375T	153.44	373.3	511.0	6863.4	11.6	18.4	13.4	45.13	31.38	1.000	11.00	1.375	31.82
30X10X1.000/1.750T	161.50	384.6	555.3	7314.0	11.7	19.0	13.2	47.50	31.75	1.000	10.00	1.750	32.19

0.4375 - 7/16 in.

500 IN. PLATE (AREA= 7.50 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS			FLANGE			SHEAR AREA		
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X .125/ .100T	2.55	11.2	1.7	5.4	.8	.5	3.2	.75	3.19	.125	2.00	.188	.46
4X 2X .125/ .100T	2.99	16.5	2.3	9.6	1.1	.6	4.1	.88	4.19	.125	2.00	.188	.59
3X 2X .188/ .150T	3.60	12.7	2.2	7.1	.9	.6	3.2	1.06	3.25	.188	2.00	.250	.71
3X 3X .188/ .150T	4.05	13.8	2.6	8.4	1.0	.6	3.2	1.19	3.31	.188	2.00	.313	.72
3X 3X .188/ .150T	4.45	14.6	3.1	9.5	1.0	.6	3.1	1.31	3.25	.188	3.00	.250	.71
4X 2X .188/ .150T	4.69	19.8	3.7	14.9	1.3	.8	4.1	1.38	4.31	.188	2.00	.313	.90
5X 2X .188/ .150T	4.90	24.5	4.2	20.5	1.5	.8	4.9	1.44	5.25	.188	2.00	.250	1.08
5X 2X .188/ .150T	5.30	25.9	4.8	23.5	1.6	.9	4.9	1.56	5.31	.188	2.00	.313	1.09
6X 2X .188/ .150T	5.95	32.2	6.1	34.8	1.9	1.1	5.7	1.75	6.31	.188	2.00	.313	1.28
6X 3X .188/ .150T	6.39	33.3	6.9	38.4	2.0	1.2	5.6	1.88	6.25	.188	3.00	.250	1.27
4X 4X .188/ .150T	6.80	23.6	6.3	23.8	1.6	1.0	3.8	2.00	4.31	.188	4.00	.313	.90
6X 3X .188/ .150T	7.00	35.0	7.9	44.1	2.1	1.3	5.6	2.06	6.31	.188	3.00	.313	1.28
5X 4X .188/ .150T	7.45	30.3	8.0	36.8	1.9	1.2	4.6	2.19	5.31	.188	4.00	.313	1.09
6X 4X .188/ .150T	8.09	37.0	9.9	53.0	2.3	1.4	5.4	2.38	6.31	.188	4.00	.313	1.28
5X 3X .250/ .430T	8.70	30.9	8.7	40.3	2.0	1.3	4.6	2.56	5.44	.250	3.00	.438	1.49
7X 3X .250/ .430T	9.15	41.5	10.5	65.5	2.5	1.6	6.2	2.69	7.31	.250	3.00	.313	1.95
6X 3X .250/ .430T	9.55	37.6	10.8	58.1	2.4	1.5	5.4	2.81	6.44	.250	3.00	.438	1.74
7X 3X .250/ .430T	9.79	43.0	11.7	72.7	2.6	1.7	6.2	2.88	7.38	.250	3.00	.375	1.97
8X 3X .250/ .430T	10.00	48.1	12.5	87.6	2.9	1.8	7.0	2.94	8.31	.250	3.00	.313	2.20
7X 4X .250/ .430T	10.20	43.6	12.6	76.6	2.7	1.8	6.1	3.00	7.31	.250	4.00	.313	1.95
7X 3X .250/ .430T	10.40	44.3	13.0	79.6	2.7	1.8	6.1	3.06	7.44	.250	3.00	.438	1.99
8X 3X .250/ .430T	10.64	49.7	13.9	96.7	3.0	1.9	6.9	3.13	8.38	.250	3.00	.375	2.22
8X 4X .250/ .430T	11.05	50.4	15.0	104.8	3.1	2.0	6.8	3.25	8.31	.250	4.00	.313	2.28
8X 3X .250/ .430T	11.25	51.1	15.3	105.4	3.1	2.1	6.9	3.31	8.44	.250	3.00	.438	2.24
6X 5X .250/ .430T	11.49	39.7	14.2	71.9	2.6	1.8	5.1	3.38	6.38	.250	5.00	.375	1.72
8X 4X .250/ .430T	11.90	52.0	16.8	112.9	3.2	2.2	6.7	3.50	8.38	.250	4.00	.375	2.22
7X 5X .250/ .430T	12.34	46.8	16.9	98.0	3.0	2.1	5.8	3.63	7.38	.250	5.00	.375	1.97
6X 5X .250/ .430T	12.55	40.9	16.8	79.8	2.7	2.0	5.8	3.69	6.44	.250	5.00	.438	1.74
8X 4X .250/ .430T	12.75	53.4	18.8	124.2	3.3	2.3	6.6	3.75	8.44	.250	4.00	.438	2.24
8X 5X .250/ .430T	13.19	53.8	19.8	128.7	3.4	2.4	6.5	3.88	8.38	.250	5.00	.375	2.22
7X 5X .250/ .430T	13.40	48.0	19.0	108.3	3.1	2.3	5.7	3.94	7.44	.250	5.00	.438	1.99
6X 6X .250/ .430T	14.04	41.9	18.6	89.4	2.8	2.1	4.8	4.13	6.44	.250	6.00	.438	1.74
8X 5X .250/ .430T	14.25	55.2	22.2	141.3	3.5	2.6	6.4	4.19	8.44	.250	5.00	.438	2.24
9X 4X .313/ .375T	14.65	59.0	20.8	152.1	3.6	2.6	7.3	4.31	9.38	.313	4.00	.375	3.09
7X 6X .250/ .430T	14.89	49.2	22.0	120.7	3.2	2.5	5.5	4.38	7.44	.250	6.00	.438	1.99
9X 4X .313/ .375T	15.50	60.5	22.9	165.2	3.7	2.7	7.2	4.56	9.44	.313	4.00	.438	3.11
10X 4X .313/ .375T	15.74	66.0	23.9	190.9	4.0	2.9	8.0	4.63	10.38	.313	4.00	.375	3.41
8X 6X .250/ .430T	15.74	56.5	25.5	157.3	3.6	2.8	6.2	4.63	8.44	.250	6.00	.438	2.24
9X 5X .313/ .375T	15.95	60.9	24.1	170.7	3.7	2.8	7.1	4.69	9.38	.313	5.00	.375	3.09
9X 4X .313/ .500T	16.35	61.9	25.0	177.9	3.8	2.9	7.1	4.81	9.50	.313	4.00	.500	3.13
10X 4X .313/ .430T	16.59	67.6	26.2	206.6	4.1	3.1	7.9	4.88	10.44	.313	4.00	.438	3.42
10X 5X .313/ .375T	17.00	68.1	27.5	213.3	4.1	3.1	7.8	5.00	10.38	.313	5.00	.375	3.41
9X 4X .313/ .563T	17.20	63.1	27.1	190.8	3.9	3.0	7.0	5.06	9.56	.313	4.00	.563	3.15
10X 4X .313/ .500T	17.44	69.1	28.5	222.2	4.2	3.2	7.8	5.13	10.50	.313	4.00	.500	3.44
10X 5X .313/ .430T	18.05	69.8	30.4	231.5	4.3	3.3	7.6	5.31	10.44	.313	5.00	.438	3.42

0.5000 - 1/2 in.



500 IN. PLATE (AREA= 7.50 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			R	YF	YF	***** BEAM DIMENSIONS *****			SHEAR AREA			
WT/FT	ZPL	ZFL	INERTIA	AREA				DEPTH	WEB THICK	WIDTH		FLANGE THICK		
10X 4X .313/.563T	18.29	70.4	30.8	237.1	4.3	3.4	3.4	7.7	5.38	10.56	.313	4.00	.563	3.46
9X 6X .313/.438T	18.50	64.0	30.5	205.3	4.0	3.2	3.2	6.7	5.44	9.44	.313	6.00	.438	3.11
10X 5X .313/.500T	19.14	71.2	33.2	249.3	4.4	3.5	3.5	7.5	5.53	10.50	.313	5.00	.500	3.44
7X 7X .313/.500T	19.35	51.3	28.6	146.9	3.3	2.9	2.9	5.1	5.69	7.50	.313	7.00	.500	2.50
10X 6X .313/.438T	19.55	71.5	34.5	254.5	4.4	3.6	3.6	7.4	5.75	10.44	.313	6.00	.438	3.42
9X 6X .313/.500T	19.75	65.3	33.6	221.7	4.1	3.4	3.4	6.6	5.81	9.50	.313	6.00	.500	3.13
10X 5X .313/.563T	20.20	72.6	36.1	266.6	4.5	3.7	3.7	7.4	5.94	10.56	.313	5.00	.563	3.46
7X 7X .313/.563T	20.84	52.2	31.4	158.1	3.4	3.0	3.0	5.0	6.13	7.56	.313	7.00	.563	2.52
10X 6X .313/.500T	20.84	72.9	38.0	274.7	4.5	3.8	3.8	7.2	6.13	10.50	.313	6.00	.500	3.44
9X 7X .313/.500T	21.45	66.5	37.8	241.0	4.2	3.6	3.6	6.4	6.31	9.50	.313	7.00	.500	3.13
12X 4X .375/.469T	21.69	83.4	36.7	330.7	4.9	4.0	4.0	9.0	6.38	12.47	.375	4.00	.469	4.86
8X 7X .313/.563T	21.90	59.9	36.4	205.2	3.8	3.4	3.4	5.6	6.44	8.56	.313	7.00	.563	2.84
10X 6X .313/.563T	22.10	74.2	41.4	293.9	4.6	4.0	4.0	7.1	6.50	10.56	.313	6.00	.563	3.46
10X 7X .313/.500T	22.54	74.3	42.7	298.1	4.6	4.0	4.0	7.0	6.53	10.50	.313	7.00	.500	3.44
12X 4X .375/.531T	22.54	85.1	39.4	351.0	5.0	4.1	4.1	8.9	6.63	12.53	.375	4.00	.531	4.89
12X 5X .375/.469T	23.26	86.0	42.0	365.9	5.1	4.3	4.3	8.7	6.84	12.47	.375	5.00	.469	4.86
12X 4X .375/.594T	23.39	86.6	42.1	370.9	5.1	4.3	4.3	8.8	6.88	12.59	.375	4.00	.594	4.91
7X 7X .375/.625T	23.80	53.3	34.7	170.9	3.4	3.2	3.2	4.9	7.00	7.63	.375	7.00	.625	3.05
10X 7X .313/.563T	24.00	75.5	46.6	318.8	4.7	4.2	4.2	6.8	7.06	10.56	.313	7.00	.563	3.46
12X 4X .375/.656T	24.24	87.9	44.7	389.7	5.2	4.4	4.4	8.7	7.13	12.66	.375	4.00	.656	4.94
12X 5X .375/.531T	24.34	87.7	45.3	389.4	5.2	4.4	4.4	8.6	7.16	12.53	.375	5.00	.531	4.89
9X 8X .313/.563T	24.85	68.7	46.2	277.8	4.3	4.0	4.0	6.0	7.31	9.56	.313	8.00	.563	3.15
12X 6X .375/.469T	24.85	88.2	47.2	398.4	5.2	4.5	4.5	8.5	7.31	12.47	.375	6.00	.469	4.86
12X 5X .375/.594T	25.40	89.2	48.6	411.7	5.2	4.6	4.6	8.5	7.47	12.59	.375	5.00	.594	4.91
10X 8X .313/.563T	25.94	76.7	52.0	342.7	4.8	4.5	4.5	6.6	7.63	10.56	.313	8.00	.563	3.46
12X 6X .375/.531T	26.15	89.8	51.2	424.8	5.3	4.7	4.7	8.3	7.69	12.53	.375	6.00	.531	4.89
12X 5X .375/.656T	26.45	90.6	51.9	434.1	5.3	4.8	4.8	8.4	7.78	12.66	.375	5.00	.656	4.94
12X 7X .375/.469T	26.45	89.9	52.3	428.1	5.3	4.8	4.8	8.2	7.78	12.47	.375	5.00	.469	4.86
7X 7X .438/.688T	26.79	54.3	38.1	183.4	3.5	3.4	3.4	4.8	7.88	7.69	.438	7.00	.688	3.59
12X 6X .375/.594T	27.40	91.3	55.1	449.8	5.4	4.9	4.9	8.2	8.06	12.59	.375	6.00	.594	4.91
12X 7X .375/.531T	27.95	91.6	57.1	458.2	5.4	5.0	5.0	8.0	8.22	12.53	.375	7.00	.531	4.89
7X 7X .438/.750T	28.25	55.1	40.8	193.5	3.5	3.5	3.5	4.7	8.31	7.75	.438	7.00	.750	3.61
12X 6X .375/.656T	28.70	92.6	59.0	474.5	5.5	5.1	5.1	8.0	8.44	12.66	.375	6.00	.656	4.94
12X 7X .375/.594T	29.44	93.0	61.7	485.3	5.5	5.2	5.2	7.9	8.66	12.59	.375	7.00	.594	4.91
14X 5X .438/.531T	29.85	104.6	57.8	559.3	5.9	5.3	5.3	9.7	8.78	14.53	.438	5.00	.531	6.58
14X 5X .438/.594T	30.91	106.4	61.5	587.8	6.0	5.5	5.5	9.6	9.03	14.59	.438	5.00	.594	6.61
12X 7X .375/.656T	30.91	94.4	66.3	512.3	5.6	5.4	5.4	7.7	9.09	12.66	.375	7.00	.656	4.94
12X 8X .375/.594T	31.45	94.5	68.1	518.2	5.6	5.5	5.5	7.6	9.25	12.59	.375	8.00	.594	4.91
14X 6X .438/.531T	31.65	107.2	64.5	605.0	6.0	5.6	5.6	9.4	9.31	14.53	.438	6.00	.531	6.58
14X 5X .438/.594T	31.99	108.0	65.3	616.7	6.0	5.7	5.7	9.5	9.41	14.66	.438	5.00	.594	6.61
7X 7X .500/.875T	32.74	56.9	46.5	214.6	3.5	3.8	3.8	4.6	9.63	7.88	.500	7.00	.875	4.19
14X 6X .438/.594T	32.95	109.0	68.9	637.1	6.1	5.8	5.8	9.2	9.69	14.59	.438	6.00	.594	6.61
14X 5X .438/.719T	33.05	109.5	68.9	643.9	6.1	5.9	5.9	9.3	9.72	14.72	.438	5.00	.719	6.67
12X 8X .375/.656T	33.15	95.8	73.4	546.9	5.6	5.7	5.7	7.5	9.75	12.66	.375	8.00	.656	4.94
7X 6X .563/1.000T	33.80	57.7	45.9	217.5	3.5	3.8	3.8	4.7	9.94	8.00	.563	6.00	1.000	4.79

0.5000 - 1/2 in.

.500 IN. PLATE (AREA= 7.50 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WEB	FLANGE	THICK	AREA	AREA
14X 6X	.438/ .656T	34.20	110.6	73.4	669.1	6.2	6.0	9.1	10.06	14.66	.438	.438	6.00	.656	6.64	6.64
14X 7X	.438/ .594T	34.95	111.2	76.4	683.3	6.2	6.1	8.9	10.28	14.59	.438	.438	6.00	.594	6.61	6.61
12X 9X	.375/ .656T	35.39	97.0	80.5	578.7	5.7	6.0	7.2	10.41	12.66	.375	.375	9.00	.656	4.94	4.94
14X 6X	.438/ .719T	35.50	112.1	77.9	699.6	6.2	6.2	9.0	10.44	14.72	.438	.438	6.00	.719	6.67	6.67
14X 7X	.438/ .656T	36.45	112.8	81.6	717.7	6.3	6.4	8.8	10.72	14.66	.438	.438	7.00	.656	6.64	6.64
14X 8X	.438/ .594T	36.99	113.0	83.9	726.6	6.3	6.4	8.7	10.88	14.59	.438	.438	8.00	.594	6.61	6.61
7X 7X	.563/1.00T	37.20	58.7	52.0	234.3	3.6	4.0	4.5	10.94	8.00	.563	.563	7.00	1.000	4.79	4.79
16X 5X	.500/ .594T	37.30	125.0	76.5	811.1	6.6	6.5	10.6	10.97	16.59	.500	.500	5.00	.594	8.55	8.55
14X 7X	.438/ .719T	37.94	114.3	86.9	751.2	6.3	6.6	8.6	11.16	14.72	.438	.438	7.00	.719	6.67	6.67
16X 5X	.500/ .656T	38.35	126.9	80.5	845.2	6.7	6.7	10.5	11.28	16.66	.500	.500	5.00	.656	8.58	8.58
14X 8X	.438/ .656T	38.69	114.6	89.7	763.8	6.4	6.7	8.5	11.38	14.66	.438	.438	8.00	.656	6.64	6.64
16X 6X	.500/ .594T	39.30	128.1	84.8	872.2	6.8	6.8	10.3	11.56	16.59	.500	.500	6.00	.594	8.55	8.55
16X 5X	.500/ .719T	39.41	128.7	84.6	879.3	6.8	6.8	10.4	11.59	16.72	.500	.500	5.00	.719	8.61	8.61
12X 9X	.438/ .719T	39.85	99.4	87.8	616.3	5.7	6.2	7.0	11.72	12.72	.438	.438	9.00	.719	5.79	5.79
14X 8X	.438/ .719T	40.39	116.1	95.7	798.3	6.4	6.9	8.3	11.88	14.72	.438	.438	8.00	.719	6.67	6.67
16X 6X	.500/ .656T	40.60	130.1	89.8	911.3	6.8	7.0	10.2	11.94	16.66	.500	.500	6.00	.656	8.58	8.58
16X 7X	.500/ .594T	41.34	130.8	93.2	929.8	6.9	7.1	10.0	12.16	16.59	.500	.500	7.00	.594	8.55	8.55
7X 7X	.625/1.125T	41.65	60.4	57.1	253.4	3.6	4.2	4.4	12.25	8.13	.625	.625	7.00	1.125	5.39	5.39
16X 6X	.500/ .719T	41.85	131.9	94.7	949.4	6.9	7.2	10.0	12.31	16.72	.500	.500	6.00	.719	8.61	8.61
16X 5X	.500/ .875T	42.09	132.7	94.9	961.5	7.0	7.2	10.1	12.38	16.88	.500	.500	5.00	.875	8.69	8.69
12X 10X	.438/ .719T	42.30	100.5	95.6	647.5	5.7	6.4	6.8	12.44	12.72	.438	.438	10.00	.719	5.79	5.79
16X 7X	.500/ .656T	42.81	132.8	98.9	972.5	7.0	7.3	9.8	12.59	16.66	.500	.500	7.00	.656	8.58	8.58
14X 9X	.438/ .719T	42.81	117.7	104.6	842.7	6.5	7.2	8.1	12.59	14.72	.438	.438	9.00	.719	6.67	6.67
16X 7X	.500/ .719T	44.30	134.6	104.7	1014.2	7.0	7.5	9.7	13.03	16.72	.500	.500	7.00	.719	8.61	8.61
16X 8X	.500/ .875T	45.05	136.0	106.9	1040.2	7.1	7.7	9.7	13.25	16.88	.500	.500	6.00	.875	8.69	8.69
16X 8X	.500/ .656T	45.05	135.0	108.0	1029.7	7.0	7.6	9.5	13.25	16.66	.500	.500	8.00	.656	8.58	8.58
14X 10X	.438/ .719T	45.25	119.0	113.4	883.5	6.5	7.4	7.8	13.31	14.72	.438	.438	10.00	.719	6.67	6.67
7X 7X	.688/1.250T	46.10	62.2	62.2	272.2	3.6	4.4	4.4	13.56	8.25	.688	.688	7.00	1.250	6.02	6.02
16X 8X	.500/ .719T	46.75	136.9	114.7	1074.9	7.1	7.9	9.4	13.75	16.72	.500	.500	8.00	.719	8.61	8.61
16X 9X	.500/ .656T	47.29	137.1	117.2	1084.1	7.1	7.9	9.3	13.91	16.66	.500	.500	9.00	.656	8.58	8.58
18X 6X	.563/ .656T	47.80	151.3	108.1	1208.3	7.5	8.0	11.2	14.06	18.66	.563	.563	6.00	.656	10.79	10.79
16X 7X	.500/ .875T	48.04	138.6	119.1	1113.1	7.2	8.0	9.3	14.13	16.88	.500	.500	7.00	.875	8.69	8.69
18X 6X	.563/ .719T	49.10	153.5	113.7	1255.4	7.6	8.2	11.0	14.44	18.72	.563	.563	6.00	.719	10.82	10.82
16X 9X	.500/ .719T	49.20	138.8	124.7	1131.2	7.2	8.1	9.1	14.47	16.72	.500	.500	9.00	.719	8.61	8.61
16X 8X	.500/ .875T	51.00	140.9	131.1	1190.0	7.2	8.4	9.0	15.00	16.88	.500	.500	8.00	.875	8.69	8.69
18X 7X	.563/ .719T	51.54	156.7	124.7	1334.7	7.7	8.5	10.7	15.16	18.72	.563	.563	7.00	.719	10.82	10.82
16X 10X	.500/ .719T	51.65	140.6	134.6	1184.3	7.2	8.4	8.8	15.19	16.72	.500	.500	10.00	.719	8.61	8.61
18X 8X	.563/ .656T	52.29	157.3	128.4	1354.7	7.7	8.6	10.5	15.38	18.66	.563	.563	8.00	.656	10.79	10.79
14X 10X	.500/ .875T	53.55	124.2	133.2	988.1	6.5	8.0	7.4	15.75	14.88	.500	.500	10.00	.875	7.69	7.69
16X 9X	.500/ .875T	53.99	142.8	143.1	1242.2	7.3	8.7	8.7	15.88	16.88	.500	.500	9.00	.875	8.69	8.69
18X 8X	.563/ .719T	53.99	159.5	135.7	1408.9	7.8	8.8	10.4	15.88	18.72	.563	.563	8.00	.719	10.82	10.82
18X 9X	.563/ .656T	54.50	159.8	138.4	1421.2	7.8	8.9	10.3	16.03	18.66	.563	.563	9.00	.656	10.79	10.79
18X 6X	.563/1.00T	54.84	161.6	137.8	1450.2	7.8	9.0	10.5	16.13	19.00	.563	.563	6.00	1.000	10.98	10.98
18X 7X	.563/ .875T	55.25	161.5	140.5	1455.9	7.8	9.0	10.4	16.25	18.88	.563	.563	7.00	.875	10.91	10.91
18X 9X	.563/ .719T	56.41	161.9	146.6	1479.1	7.8	9.1	10.1	16.59	18.72	.563	.563	9.00	.719	10.82	10.82

0.5000 - 1/2 in.



.500 IN. PLATE (AREA= 7.50 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X10X .500/.875T	56.95	144.4	154.9	1299.1	7.3	9.0	8.4	16.75	16.88	.500	10.00	.875	8.69
18X10X .563/.719T	58.85	164.1	157.7	1545.5	7.9	9.4	9.8	17.31	18.72	.563	10.00	.719	10.82
18X 8X .563/1.000T	61.64	167.7	167.9	1635.9	8.0	9.8	9.7	18.13	19.00	.563	8.00	1.000	10.98
18X11X .563/.875T	67.15	170.7	193.2	1756.4	8.0	10.3	9.1	19.75	18.88	.563	11.00	.875	10.91
18X10X .563/1.000T	68.44	172.1	197.8	1794.8	8.1	10.4	9.1	20.13	19.00	.563	10.00	1.000	10.98
18X12X .563/.875T	70.14	172.4	206.1	1819.0	8.0	10.6	8.8	20.63	18.88	.563	12.00	.875	10.91
18X 9X .625/1.125T	72.69	176.7	201.2	1846.6	8.0	10.5	9.2	21.38	19.13	.625	9.00	1.125	12.27
21X 9X .688/.875T	75.85	209.1	208.9	2339.0	8.9	11.2	11.2	22.31	21.88	.688	9.00	.875	15.40
21X10X .688/.875T	79.05	212.1	223.9	2437.8	8.9	11.5	10.9	23.19	21.88	.688	10.00	.875	15.40
21X 8X .688/1.125T	79.70	214.3	225.9	2488.6	9.0	11.6	11.0	23.44	22.13	.688	8.00	1.125	15.57
21X11X .688/.875T	81.80	214.8	238.9	2531.0	9.0	11.8	10.6	24.06	21.88	.688	11.00	.875	15.40
21X 9X .688/1.125T	83.50	217.6	244.7	2606.9	9.0	12.0	10.7	24.56	22.13	.688	9.00	1.125	15.57
21X12X .688/.875T	84.80	217.2	253.8	2619.0	9.0	12.1	10.3	24.94	21.88	.688	12.00	.875	15.40
21X10X .688/1.125T	87.35	220.6	263.4	2716.7	9.0	12.3	10.3	25.69	22.13	.688	10.00	1.125	15.57
21X13X .688/.875T	87.75	219.4	268.4	2701.4	9.0	12.3	10.1	25.81	21.88	.688	13.00	.875	15.40
24X10X .750/.875T	90.95	256.7	269.4	3335.7	9.9	13.0	12.4	26.75	24.88	.750	10.00	.875	19.04
24X 8X .750/1.125T	91.80	259.1	271.6	3398.3	9.9	13.1	12.5	27.00	25.13	.750	8.00	1.125	19.22
24X11X .750/.875T	93.94	260.1	285.9	3456.5	9.9	13.3	12.1	27.63	24.88	.750	11.00	.875	19.84
24X 9X .750/1.125T	95.64	263.4	292.7	3553.1	10.0	13.5	12.1	28.13	25.13	.750	9.00	1.125	19.22
24X12X .750/.875T	96.90	263.2	302.6	3572.4	10.0	13.6	11.8	28.50	24.88	.750	12.00	.875	19.04
24X10X .750/1.125T	99.45	267.2	313.9	3699.4	10.0	13.8	11.8	29.25	25.13	.750	10.00	1.125	19.22
24X13X .750/.875T	99.89	266.0	319.5	3684.1	10.0	13.8	11.5	29.38	24.88	.750	13.00	.875	19.84
21X14X .688/1.125T	102.65	229.5	338.2	3093.8	9.1	13.5	9.1	30.19	22.13	.688	14.00	1.125	15.57
21X15X .688/1.125T	106.45	231.2	356.7	3174.2	9.0	13.7	8.9	31.31	22.13	.688	15.00	1.125	15.57
24X12X .750/1.125T	107.10	273.7	356.0	3965.9	10.1	14.5	11.1	31.50	25.13	.750	12.00	1.125	19.22
24X13X .750/1.125T	110.94	276.5	377.1	4088.8	10.1	14.8	10.8	32.63	25.13	.750	13.00	1.125	19.22
27X 9X .875/1.500T	126.24	338.7	416.8	5418.3	11.0	16.0	13.0	37.13	28.50	.875	9.00	1.500	25.38
27X10X .875/1.375T	127.09	338.6	423.6	5434.9	11.0	16.0	12.6	37.38	28.38	.875	10.00	1.375	25.27
27X13X .875/1.125T	130.05	339.7	445.5	5518.0	11.0	16.2	12.4	38.25	28.13	.875	13.00	1.125	25.05
27X10X .875/1.500T	131.34	343.7	447.1	5635.9	11.1	16.4	12.6	38.63	28.50	.875	10.00	1.500	25.38
27X11X .875/1.375T	131.75	343.2	451.7	5632.1	11.0	16.4	12.5	38.75	28.38	.875	11.00	1.375	25.27
27X14X .875/1.125T	133.89	343.1	468.7	5672.1	11.0	16.5	12.1	39.38	28.13	.875	14.00	1.125	25.05
27X15X .875/1.125T	137.70	346.3	491.6	5817.3	11.0	16.8	11.8	40.50	28.13	.875	15.00	1.125	25.05
27X13X .875/1.500T	146.64	356.0	537.9	6212.6	11.1	17.4	11.6	43.13	28.50	.875	13.00	1.500	25.38
30X10X1.000/1.375T	148.75	410.8	498.5	7179.9	11.8	17.5	14.4	43.75	31.38	1.000	10.00	1.375	31.88
30X10X1.000/1.500T	153.80	417.2	524.4	7435.2	11.9	17.8	14.2	45.00	31.50	1.000	10.00	1.500	32.00
30X11X1.000/1.375T	153.44	416.7	529.3	7432.4	11.9	17.8	14.0	45.13	31.38	1.000	11.00	1.375	31.88
30X10X1.000/1.750T	161.50	428.9	575.1	7923.8	12.0	18.5	13.8	47.50	31.75	1.000	10.00	1.750	32.25

0.5000 - 1/2 in.

.563 IN. PLATE (AREA = 9.49 SQ. IN.)

***** BEAM DIMENSIONS *****													
SECTION MODULUS													
NOMINAL SIZE		WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK
3X 2X .125/.188T	2.55	12.1	1.7	5.7	.7	.5	3.3	.75	3.19	.125	2.00	.188	.47
4X 2X .125/.188T	2.99	18.1	2.4	10.0	1.0	.6	4.2	.88	4.19	.125	2.00	.188	.59
3X 2X .188/.250T	3.60	14.0	2.3	7.5	.8	.5	3.3	1.06	3.25	.188	2.00	.250	.72
3X 2X .188/.313T	4.05	15.4	2.7	8.9	.9	.6	3.3	1.19	3.31	.188	2.00	.313	.73
3X 3X .188/.250T	4.45	16.4	3.1	10.0	1.0	.6	3.2	1.31	3.25	.188	3.00	.250	.72
4X 2X .188/.313T	4.69	22.5	3.7	15.7	1.2	.7	4.2	1.38	4.31	.188	2.00	.313	.92
5X 2X .188/.250T	4.90	28.0	4.3	21.5	1.4	.8	5.0	1.44	5.25	.188	2.00	.250	1.09
5X 2X .188/.313T	5.30	29.9	4.9	24.6	1.5	.8	5.0	1.56	5.31	.188	2.00	.313	1.10
6X 2X .188/.313T	5.95	37.6	6.2	36.4	1.8	1.0	5.9	1.75	6.31	.188	2.00	.313	1.29
6X 3X .188/.250T	6.39	39.1	7.0	40.3	1.9	1.0	5.8	1.88	6.25	.188	3.00	.250	1.28
4X 4X .188/.313T	6.80	27.6	6.4	25.2	1.5	.9	4.0	2.00	4.31	.188	4.00	.313	.92
6X 3X .188/.313T	7.00	41.3	8.1	46.3	2.0	1.1	5.8	2.06	6.31	.188	3.00	.313	1.29
5X 4X .188/.313T	7.45	35.7	8.1	38.9	1.9	1.1	4.8	2.19	5.31	.188	4.00	.313	1.10
6X 4X .188/.313T	8.09	44.8	10.0	56.0	2.2	1.3	5.6	2.38	6.31	.188	4.00	.313	1.29
5X 3X .250/.438T	8.70	36.6	8.8	42.7	1.9	1.2	4.8	2.56	5.44	.250	3.00	.438	1.50
7X 3X .250/.313T	9.15	49.5	10.7	69.2	2.4	1.4	6.5	2.69	7.31	.250	3.00	.313	1.97
6X 3X .250/.438T	9.55	44.9	10.9	61.6	2.2	1.4	5.6	2.81	6.44	.250	3.00	.438	1.75
7X 3X .250/.375T	9.79	51.4	11.9	77.0	2.5	1.5	6.4	2.88	7.38	.250	3.00	.375	1.99
8X 3X .250/.313T	10.00	57.6	12.8	92.6	2.7	1.6	7.3	2.94	8.31	.250	3.00	.313	2.22
7X 4X .250/.438T	10.20	52.2	12.9	81.2	2.5	1.6	6.3	3.00	7.31	.250	4.00	.313	1.97
8X 3X .250/.375T	10.40	53.1	13.2	84.5	2.6	1.6	6.4	3.06	7.44	.250	3.00	.438	2.00
8X 3X .250/.375T	10.64	59.7	14.2	102.5	2.8	1.7	7.2	3.13	8.38	.250	3.00	.375	2.24
8X 4X .250/.313T	11.05	60.6	15.2	108.0	2.9	1.8	7.1	3.25	8.31	.250	4.00	.313	2.22
8X 3X .250/.438T	11.25	61.5	15.6	112.0	3.0	1.8	7.2	3.31	8.44	.250	3.00	.438	2.25
6X 5X .250/.375T	11.49	47.8	14.4	76.8	2.4	1.6	5.3	3.38	6.38	.250	5.00	.375	1.74
8X 4X .250/.375T	11.90	62.7	17.1	120.2	3.0	1.9	7.0	3.50	8.38	.250	4.00	.375	2.24
7X 5X .250/.375T	12.34	56.5	17.2	104.8	2.8	1.9	6.1	3.63	7.38	.250	5.00	.375	1.99
6X 5X .250/.438T	12.55	49.4	16.3	85.7	2.5	1.7	5.3	3.69	6.44	.250	5.00	.438	1.75
8X 4X .250/.438T	12.75	64.6	19.1	132.6	3.2	2.1	7.0	3.75	8.44	.250	4.00	.438	2.25
8X 5X .250/.375T	13.19	65.2	20.2	137.7	3.2	2.1	6.8	3.88	8.38	.250	5.00	.375	2.24
7X 5X .250/.438T	13.40	58.2	19.3	116.2	2.9	2.0	6.0	3.94	7.44	.250	5.00	.438	2.00
6X 6X .250/.438T	14.04	50.8	18.9	96.4	2.7	1.9	5.1	4.13	6.44	.250	6.00	.438	1.75
8X 5X .250/.438T	14.25	66.9	22.5	151.7	3.3	2.3	6.7	4.19	8.44	.250	5.00	.438	2.25
9X 4X .313/.375T	14.65	71.2	21.2	162.6	3.4	2.3	7.7	4.31	9.38	.313	4.00	.375	3.11
7X 6X .250/.438T	14.89	59.8	22.4	130.2	3.1	2.2	5.8	4.38	7.44	.250	6.00	.438	2.00
9X 4X .313/.500T	15.30	73.2	23.4	177.1	3.5	2.4	7.6	4.56	9.44	.313	4.00	.500	3.13
10X 4X .313/.375T	15.74	79.7	24.4	204.4	3.8	2.6	8.4	4.63	10.38	.313	4.00	.375	3.43
8X 6X .250/.438T	15.74	68.7	26.0	169.7	3.5	2.5	6.5	4.63	8.44	.250	6.00	.438	2.25
9X 5X .313/.375T	15.95	73.8	24.6	183.2	3.6	2.5	7.5	4.69	9.38	.313	5.00	.375	3.11
9X 4X .313/.500T	16.35	74.9	25.5	191.2	3.7	2.6	7.5	4.81	9.50	.313	4.00	.500	3.15
10X 4X .313/.438T	16.59	81.8	26.7	221.7	3.9	2.7	8.2	5.00	10.38	.313	4.00	.438	3.44
10X 5X .313/.375T	17.00	82.5	28.1	229.1	4.0	2.8	8.2	5.06	10.38	.313	5.00	.375	3.43
9X 4X .313/.500T	17.20	76.6	27.6	205.5	3.8	2.7	7.4	5.06	9.56	.313	4.00	.563	3.17
10X 4X .313/.500T	17.44	83.7	29.1	238.9	4.0	2.9	8.2	5.13	10.50	.313	4.00	.500	3.46
10X 5X .313/.438T	18.05	84.6	31.0	249.4	4.1	2.9	8.1	5.31	10.44	.313	5.00	.438	3.44

0.5625 - 9/16 in.



.563 IN. PLATE (AREA= 9.49 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R		YF		AREA		DEPTH		WEB		FLANGE		SHEAR	
		WT/FT	ZPL	ZFL				YP						THICK		WIDTH	THICK	AREA	
10X 4X	.313/.563T	18.29	85.4	31.4	255.6	4.1	3.0	8.1	5.39	10.56	.313	4.00	.563	3.48					
9X 6X	.313/.438T	18.50	77.8	31.1	222.0	3.9	2.9	7.1	5.44	9.44	.313	6.00	.438	3.13					
10X 5X	.313/.500T	19.14	86.5	33.9	269.4	4.2	3.1	7.9	5.63	10.50	.313	5.00	.500	3.46					
7X 7X	.313/.500T	19.35	62.5	29.1	160.1	3.2	2.6	5.5	5.69	7.50	.313	7.00	.500	2.52					
10X 6X	.313/.438T	19.55	86.8	35.2	275.3	4.3	3.2	7.0	5.75	10.44	.313	6.00	.438	3.44					
9X 6X	.313/.500T	19.75	79.5	34.2	240.5	4.0	3.0	7.0	5.81	9.50	.313	6.00	.500	3.15					
10X 5X	.313/.563T	20.20	88.2	36.8	288.9	4.3	3.3	7.8	5.94	10.56	.313	5.00	.563	3.48					
7X 7X	.313/.563T	20.84	63.7	32.0	173.0	3.3	2.7	5.4	6.13	7.56	.313	7.00	.563	2.54					
10X 6X	.313/.500T	20.84	88.7	38.7	298.1	4.4	3.4	7.7	6.13	10.50	.313	6.00	.500	3.46					
9X 7X	.313/.500T	21.45	81.0	38.5	262.6	4.1	3.2	6.8	6.31	9.50	.313	7.00	.500	3.15					
12X 4X	.375/.469T	21.69	100.7	37.6	356.8	4.7	3.5	9.5	6.38	12.47	.375	4.00	.469	4.89					
8X 7X	.313/.563T	21.90	73.1	37.1	224.5	3.8	3.1	6.1	6.44	8.56	.313	7.00	.563	2.86					
10X 6X	.313/.563T	22.10	90.3	42.2	319.9	4.5	3.5	7.6	6.50	10.56	.313	6.00	.563	3.48					
10X 7X	.313/.500T	22.54	90.4	43.5	324.9	4.5	3.6	7.5	6.63	10.50	.313	7.00	.500	3.46					
12X 4X	.375/.531T	22.54	102.8	40.3	379.3	4.9	3.7	9.4	6.63	12.53	.375	4.00	.531	4.91					
12X 5X	.375/.469T	23.26	104.0	42.9	396.1	4.9	3.8	9.2	6.84	12.47	.375	5.00	.469	4.89					
12X 4X	.375/.594T	23.39	104.6	43.1	401.5	5.0	3.8	9.3	6.88	12.59	.375	4.00	.594	4.93					
7X 7X	.375/.625T	23.80	64.9	35.5	187.9	3.4	2.9	5.3	7.00	7.63	.375	7.00	.625	3.07					
10X 7X	.313/.563T	24.00	92.0	47.5	348.6	4.6	3.8	7.3	7.06	10.56	.313	7.00	.563	3.48					
12X 4X	.375/.656T	24.24	106.3	45.7	422.7	5.0	4.0	9.2	7.13	12.66	.375	4.00	.656	4.96					
12X 5X	.375/.531T	24.34	106.1	46.4	422.5	5.0	4.0	9.1	7.16	12.53	.375	5.00	.531	4.91					
9X 8X	.313/.563T	24.85	83.8	47.1	305.2	4.3	3.6	6.5	7.31	9.56	.313	8.00	.563	3.17					
12X 6X	.375/.469T	24.85	106.6	48.2	432.8	5.1	4.1	9.0	7.31	12.47	.375	6.00	.469	4.89					
12X 5X	.375/.594T	25.40	107.9	49.7	447.6	5.1	4.1	9.0	7.47	12.59	.375	5.00	.594	4.93					
10X 8X	.313/.563T	25.94	93.5	53.0	376.4	4.7	4.0	7.1	7.63	10.56	.313	8.00	.563	3.48					
12X 6X	.375/.531T	26.15	108.7	52.4	462.6	5.2	4.3	8.8	7.69	12.53	.375	6.00	.531	4.91					
12X 5X	.375/.656T	26.45	109.6	53.1	472.9	5.2	4.3	8.9	7.78	12.66	.375	5.00	.656	4.96					
12X 7X	.375/.469T	26.45	108.9	53.5	467.6	5.2	4.3	8.7	7.78	12.47	.375	7.00	.469	4.89					
7X 7X	.438/.688T	26.79	66.1	39.0	202.4	3.4	3.1	5.2	7.88	7.69	.438	7.00	.688	3.61					
12X 6X	.375/.594T	27.40	110.5	56.4	491.0	5.3	4.4	8.7	8.06	12.59	.375	6.00	.594	4.93					
12X 7X	.375/.531T	27.95	110.9	58.4	500.8	5.3	4.5	8.6	8.22	12.53	.375	7.00	.531	4.91					
7X 7X	.438/.750T	28.25	67.1	41.8	214.1	3.5	3.2	5.1	8.31	7.75	.438	7.00	.750	3.64					
12X 6X	.375/.656T	28.70	112.2	60.4	519.2	5.4	4.6	8.6	8.44	12.66	.375	6.00	.656	4.96					
12X 7X	.375/.594T	29.44	112.7	63.1	531.8	5.4	4.7	8.4	8.66	12.59	.375	7.00	.594	4.93					
14X 5X	.438/.531T	29.85	125.7	59.3	608.2	5.8	4.8	10.3	8.78	14.53	.438	5.00	.531	6.61					
14X 5X	.438/.594T	30.91	127.9	63.1	640.3	5.9	5.0	10.1	9.09	14.59	.438	5.00	.594	6.64					
12X 7X	.375/.656T	30.91	114.4	67.8	562.9	5.5	4.9	8.3	9.09	12.66	.375	7.00	.656	4.96					
14X 6X	.375/.594T	31.45	114.5	69.7	569.9	5.5	5.0	8.2	9.25	12.59	.375	8.00	.594	4.93					
14X 6X	.438/.531T	31.65	128.9	66.2	659.8	5.9	5.1	10.0	9.31	14.53	.438	6.00	.531	6.61					
14X 5X	.438/.656T	31.99	129.9	67.0	672.8	6.0	5.2	10.0	9.41	14.66	.438	5.00	.656	6.67					
7X 7X	.500/.875T	32.74	69.2	47.8	238.7	3.5	3.4	5.0	9.63	7.88	.500	7.00	.875	4.22					
14X 6X	.438/.594T	32.95	131.0	70.8	696.1	6.0	5.3	9.8	9.69	14.59	.438	6.00	.594	6.64					
14X 5X	.438/.719T	33.05	131.7	70.8	703.5	6.1	5.3	9.9	9.72	14.72	.438	5.00	.719	6.69					
12X 8X	.375/.656T	33.15	116.2	75.1	603.2	5.6	5.2	8.0	9.75	12.66	.375	8.00	.656	4.96					
7X 6X	.563/1.000T	33.80	70.0	47.3	241.6	3.5	3.5	5.1	9.94	8.00	.563	6.00	1.000	4.82					

0.5625 - 9/16 in.

.563 IN. PLATE (AREA= 9.49 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR AREA	
		WT/FI	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK										
14X 6X	.438/ .561	34.20	133.1	75.4	732.4	6.1	5.5	9.7	10.06	14.66	.438	6.00	.656										6.67
14X 7X	.438/ .594	34.95	133.7	78.4	748.9	6.2	5.6	9.6	10.20	14.59	.438	7.00	.594										6.64
12X 9X	.375/ .561	35.39	117.7	82.4	680.5	5.7	5.4	7.8	10.41	12.66	.375	9.00	.556										4.96
14X 6X	.438/ .719	35.50	134.9	80.0	767.2	6.2	5.7	9.6	10.44	14.72	.438	6.00	.719										6.69
14X 7X	.438/ .656	36.45	135.7	83.7	788.2	6.2	5.8	9.4	10.72	14.66	.438	7.00	.656										6.67
14X 8X	.438/ .594	36.99	136.0	86.1	798.7	6.3	5.9	9.3	10.88	14.59	.438	8.00	.594										6.64
7X 7X	.5/3/1.000	37.20	71.2	53.5	261.6	3.6	3.7	4.9	10.94	8.00	.563	7.00	1.000										4.82
16X 5X	.500/ .594	37.30	149.2	78.8	884.4	6.6	5.9	11.2	10.97	16.59	.500	5.00	.594										8.58
14X 7X	.438/ .719	37.94	137.5	89.1	826.6	6.3	6.0	9.3	11.16	14.72	.438	7.00	.719										6.69
16X 5X	.500/ .656	38.35	151.5	82.9	922.7	6.7	6.1	11.1	11.20	16.66	.500	5.00	.656										8.61
14X 8X	.438/ .656	38.69	137.9	92.1	840.5	6.3	6.1	9.1	11.38	14.66	.438	8.00	.656										6.67
16X 6X	.500/ .594	39.30	152.9	87.3	953.4	6.7	6.2	10.9	11.56	16.59	.500	6.00	.594										8.58
16X 5X	.500/ .719	39.41	153.6	87.2	981.1	6.8	6.3	11.0	11.59	16.72	.500	5.00	.719										8.64
12X 9X	.438/ .719	39.85	120.1	90.0	683.5	5.7	5.7	7.6	11.72	12.72	.438	9.00	.719										5.82
14X 8X	.438/ .719	40.39	139.7	98.2	801.3	6.4	6.3	9.0	11.88	14.72	.438	8.00	.719										6.69
16X 6X	.500/ .656	40.60	155.2	92.4	937.6	6.8	6.4	10.8	11.94	16.66	.500	6.00	.656										8.61
16X 7X	.500/ .594	41.34	156.1	95.9	1018.7	6.9	6.5	10.6	12.16	16.59	.500	7.00	.594										8.58
7X 7X	.625/1.125	41.65	73.1	59.0	283.8	3.6	3.9	4.8	12.25	8.13	.625	7.00	1.125										5.43
16X 6X	.500/ .719	41.85	157.4	97.5	1040.6	6.9	6.6	10.7	12.31	16.72	.500	6.00	.719										8.64
16X 5X	.500/ .875	42.09	158.4	97.7	1053.9	6.9	6.7	10.8	12.38	16.88	.500	5.00	.875										8.72
12X 10X	.438/ .719	42.30	121.5	98.0	728.5	5.7	5.9	7.4	12.44	12.72	.438	10.00	.719										5.82
16X 7X	.500/ .656	42.81	158.4	101.8	1087.1	7.0	6.7	10.5	12.59	16.66	.500	7.00	.656										8.61
14X 9X	.438/ .719	42.81	141.6	107.3	933.1	6.5	6.6	8.7	12.59	14.72	.438	9.00	.719										6.69
16X 7X	.500/ .719	44.30	160.6	107.8	1114.6	7.0	6.9	10.3	13.03	16.72	.500	7.00	.719										8.64
16X 6X	.500/ .875	45.05	162.2	110.1	1143.8	7.1	7.1	10.4	13.25	16.88	.500	6.00	.875										8.72
16X 8X	.500/ .656	45.05	161.2	111.1	1132.7	7.1	7.0	10.2	13.25	16.66	.500	8.00	.656										8.61
14X 10X	.438/ .719	45.25	143.3	116.3	981.2	6.6	6.8	8.4	13.31	14.72	.438	10.00	.719										6.69
7X 7X	.688/1.250	46.10	75.1	64.4	305.5	3.6	4.1	4.7	13.56	8.25	.688	7.00	1.250										6.06
16X 8X	.500/ .719	46.75	163.3	118.1	1184.4	7.1	7.3	10.0	13.75	16.72	.500	8.00	.719										8.64
16X 9X	.500/ .656	47.29	163.6	120.6	1195.3	7.1	7.3	9.9	13.91	16.66	.500	9.00	.656										8.61
18X 6X	.563/ .656	47.80	179.1	111.6	1321.7	7.5	7.4	11.8	14.06	18.66	.563	6.00	.656										10.82
16X 7X	.500/ .875	48.04	165.4	122.6	1227.9	7.2	7.4	11.0	14.13	16.88	.500	7.00	.875										8.72
18X 6X	.563/ .719	49.10	181.6	117.4	1374.7	7.6	7.6	11.7	14.44	18.72	.563	6.00	.719										10.86
16X 9X	.500/ .719	49.20	165.7	128.3	1249.5	7.2	7.5	9.7	14.47	16.72	.500	9.00	.719										8.64
16X 8X	.500/ .875	51.00	168.1	134.9	1305.4	7.3	7.8	9.7	15.00	16.88	.500	8.00	.875										8.72
18X 7X	.563/ .719	51.54	185.4	128.7	1464.5	7.7	7.9	11.4	15.16	18.72	.563	7.00	.719										10.86
16X 10X	.500/ .719	51.65	167.8	138.5	1311.2	7.3	7.8	9.5	15.19	16.72	.500	10.00	.719										8.64
18X 8X	.563/ .656	52.29	186.1	132.5	1487.6	7.7	8.0	11.2	15.38	18.66	.563	8.00	.656										10.82
14X 10X	.500/ .875	53.55	148.8	137.0	1101.5	6.6	7.4	8.0	15.75	14.88	.500	10.00	.875										7.72
16X 9X	.500/ .719	53.99	170.4	147.3	1378.0	7.4	8.1	9.4	15.88	16.88	.500	9.00	.719										8.72
18X 8X	.563/ .719	53.99	188.6	139.9	1549.0	7.8	8.2	11.1	15.88	18.72	.563	8.00	.719										10.86
18X 9X	.563/ .656	54.50	189.0	142.7	1563.3	7.8	8.3	11.0	16.03	18.66	.563	9.00	.656										10.82
18X 6X	.563/1.000	54.84	191.1	142.2	1594.9	7.9	8.3	11.2	16.13	19.00	.563	6.00	1.000										11.01
18X 7X	.563/ .875	55.25	191.0	144.9	1602.0	7.9	8.4	11.1	16.25	18.88	.563	7.00	.875										10.95
18X 9X	.563/ .719	56.41	191.5	151.2	1629.3	7.9	8.5	10.8	16.59	18.72	.563	9.00	.719										10.86

0.5625 - 9/16 in.



.563 IN. PLATE (AREA= 9.49 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	UP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X10X .500/.875T	56.95	172.4	159.5	1444.8	7.4	8.4	9.1	16.75	16.88	.500	10.00	.875	8.72
18X10X .563/.719T	58.85	194.1	162.5	1705.7	8.0	8.8	10.5	17.31	18.72	.563	10.00	.719	10.86
18X 8X .563/1.000T	61.64	198.2	173.2	1808.3	8.1	9.1	10.4	18.13	19.00	.563	10.00	1.000	11.01
18X11X .563/.875T	67.15	201.8	199.2	1949.1	8.2	9.7	9.8	19.75	18.88	.563	11.00	.875	10.95
18X10X .563/1.000T	68.44	203.5	204.1	1993.1	8.2	9.8	9.8	20.13	19.00	.563	10.00	1.000	11.01
18X12X .563/.875T	70.14	203.8	212.5	2022.4	8.2	9.9	9.5	20.63	18.88	.563	12.00	.875	10.95
18X 9X .625/1.125T	72.69	207.8	207.8	2046.3	8.1	9.8	9.8	21.38	19.13	.625	9.00	1.125	12.31
21X 9X .688/.875T	75.85	243.4	216.0	2568.4	9.0	10.6	11.9	22.31	21.88	.688	9.00	.875	15.44
21X10X .688/.875T	78.85	246.8	231.5	2680.7	9.1	10.9	11.6	23.19	21.88	.688	10.00	.875	15.44
21X 8X .688/1.125T	79.70	249.2	233.7	2736.7	9.1	11.0	11.7	23.44	22.13	.688	8.00	1.125	15.61
21X11X .688/.875T	81.80	249.9	246.9	2786.9	9.1	11.2	11.3	24.06	21.88	.688	11.00	.875	15.44
21X 9X .688/1.125T	83.50	253.1	253.1	2871.5	9.2	11.3	11.3	24.56	22.13	.688	9.00	1.125	15.61
21X12X .688/.875T	84.80	252.6	262.2	2887.5	9.2	11.4	11.0	24.94	21.88	.688	12.00	.875	15.44
21X10X .688/1.125T	87.35	256.4	272.4	2997.2	9.2	11.7	11.8	25.69	22.13	.688	10.00	1.125	15.61
21X13X .688/.875T	87.75	255.1	277.3	2981.8	9.2	11.7	10.8	25.81	21.88	.688	13.00	.875	15.44
24X10X .750/.875T	90.95	295.5	278.7	3648.8	10.0	12.3	13.1	26.75	24.88	.750	10.00	.875	19.08
24X 8X .750/1.125T	91.80	298.2	281.1	3717.4	10.1	12.5	13.2	27.00	25.13	.750	8.00	1.125	19.27
24X11X .750/.875T	93.94	299.3	295.7	3784.5	10.1	12.6	12.8	27.63	24.88	.750	11.00	.875	19.08
24X 9X .750/1.125T	95.64	303.0	302.9	3891.4	10.2	12.8	12.8	28.13	25.13	.750	9.00	1.125	19.27
24X12X .750/.875T	96.90	302.8	312.9	3915.2	10.2	12.9	12.5	28.50	24.88	.750	12.00	.875	19.08
24X10X .750/1.125T	99.45	307.3	324.7	4056.4	10.2	13.2	12.5	29.25	25.13	.750	10.00	1.125	19.27
24X13X .750/.875T	99.89	306.0	330.3	4041.4	10.2	13.2	12.2	29.38	24.88	.750	13.00	.875	19.08
21X14X .688/1.125T	102.65	266.6	349.6	3432.7	9.3	12.9	9.8	30.19	22.13	.688	14.00	1.125	15.61
21X15X .688/1.125T	106.45	268.6	368.7	3526.3	9.3	13.1	9.6	31.31	22.13	.688	15.00	1.125	15.61
24X12X .750/1.125T	107.10	314.6	368.1	4358.3	10.3	13.9	11.6	31.50	25.13	.750	12.00	1.125	19.27
24X13X .750/1.125T	110.94	317.8	389.9	4498.2	10.3	14.2	11.5	32.63	25.13	.750	13.00	1.125	19.27
27X 9X .875/1.500T	126.24	383.6	431.3	5900.3	11.2	15.4	13.7	37.13	28.50	.875	9.00	1.500	25.43
27X10X .875/1.375T	127.09	383.6	438.3	5920.1	11.2	15.4	13.5	37.38	28.38	.875	10.00	1.375	25.32
27X13X .875/1.125T	130.05	384.8	460.6	6015.5	11.2	15.6	13.1	38.25	28.13	.875	13.00	1.125	25.11
27X10X .875/1.500T	131.34	389.2	462.6	6143.8	11.3	15.8	13.3	38.63	28.50	.875	10.00	1.500	25.43
27X11X .875/1.375T	131.75	388.6	467.2	6140.3	11.3	15.8	13.1	38.75	28.38	.875	11.00	1.375	25.32
27X14X .875/1.125T	133.89	388.6	484.6	6187.9	11.3	15.9	12.8	39.38	28.13	.875	14.00	1.125	25.11
27X15X .875/1.125T	137.70	392.2	508.1	6350.4	11.3	16.2	12.5	40.50	28.13	.875	15.00	1.125	25.11
27X13X .875/1.500T	146.64	402.8	556.2	6789.6	11.4	16.9	12.2	43.13	28.50	.875	13.00	1.500	25.43
30X10X1.000/1.375T	148.75	459.4	515.4	7759.0	12.1	16.9	15.1	43.75	31.50	1.000	10.00	1.375	31.94
30X10X1.000/1.500T	153.80	466.3	542.1	8037.9	12.1	17.2	14.8	45.00	31.50	1.000	10.00	1.500	32.06
30X11X1.000/1.375T	153.44	465.8	547.1	8036.4	12.1	17.3	14.7	45.13	31.38	1.000	11.00	1.375	31.94
30X10X1.000/1.750T	161.50	479.1	594.5	8572.8	12.3	17.9	14.4	47.50	31.75	1.000	10.00	1.750	32.31

0.5625 - 9/16 in.

.625 IN. PLATE (AREA= 11.72 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS				BEAM DIMENSIONS				FLANGE		SHEAR AREA			
3X 2X	4X 2X	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X .125/.188T	4X 2X .125/.188T	2.55	12.8	1.8	6.0	.7	.5	3.3	.75	3.19	.125	2.00	.188	.46	
4X 2X .125/.188T	4X 2X .125/.188T	2.99	19.4	2.4	10.4	.8	.5	4.3	.88	4.19	.125	2.00	.188	.68	
3X 2X .188/.250T	4X 2X .188/.250T	3.60	15.0	2.4	7.9	.9	.5	3.3	1.06	3.25	.188	2.00	.250	.73	
3X 2X .188/.313T	4X 2X .188/.313T	4.05	16.7	2.8	9.4	.8	.6	3.4	1.19	3.31	.188	2.00	.313	.74	
3X 3X .188/.250T	4X 3X .188/.250T	4.45	17.9	3.2	10.5	.9	.6	3.3	1.31	3.25	.188	3.00	.250	.73	
4X 2X .188/.313T	4X 2X .188/.313T	4.69	24.8	3.8	16.4	1.1	.7	4.3	1.38	4.31	.188	2.00	.313	.93	
5X 2X .188/.250T	4X 3X .188/.250T	4.90	31.1	4.3	22.4	1.3	.7	5.2	1.44	5.25	.188	2.00	.250	1.10	
5X 2X .188/.313T	4X 3X .188/.313T	5.30	33.4	5.0	25.6	1.4	.8	5.2	1.56	5.31	.188	2.00	.313	1.12	
6X 2X .188/.313T	4X 3X .188/.313T	5.95	42.5	6.3	37.8	1.7	.9	6.0	1.75	6.31	.188	2.00	.313	1.30	
6X 3X .188/.250T	4X 3X .188/.250T	6.39	44.4	7.1	41.9	1.8	.9	5.9	1.88	6.25	.188	3.00	.250	1.29	
4X 4X .188/.313T	4X 3X .188/.313T	6.80	31.3	6.5	26.5	1.4	.8	4.1	2.00	4.31	.188	4.00	.313	.93	
6X 3X .188/.313T	4X 3X .188/.313T	7.00	47.3	8.2	40.3	1.9	1.0	5.9	2.06	6.31	.188	3.00	.313	1.30	
5X 4X .188/.313T	4X 3X .188/.313T	7.45	40.9	8.2	48.7	1.7	1.0	4.9	2.19	5.31	.188	4.00	.313	1.12	
6X 4X .188/.313T	4X 3X .188/.313T	8.09	50.9	10.1	58.6	2.0	1.2	5.8	2.38	6.31	.188	4.00	.313	1.30	
5X 3X .250/.438T	4X 3X .250/.438T	8.70	42.1	9.0	44.9	1.8	1.1	5.0	2.56	5.44	.250	3.00	.438	1.52	
7X 3X .250/.313T	4X 3X .250/.313T	9.15	57.3	10.9	72.4	2.2	1.3	6.7	2.69	7.31	.250	3.00	.313	1.98	
6X 3X .250/.438T	4X 3X .250/.438T	9.55	52.0	11.1	64.7	2.1	1.2	5.8	2.81	6.44	.250	3.00	.438	1.77	
7X 3X .250/.375T	4X 3X .250/.375T	9.79	59.8	12.1	80.7	2.4	1.3	6.7	2.88	7.38	.250	3.00	.375	2.00	
8X 3X .250/.313T	4X 3X .250/.313T	10.00	67.1	12.9	96.9	2.6	1.4	7.5	2.94	8.31	.250	3.00	.313	2.23	
7X 4X .250/.313T	4X 3X .250/.313T	10.20	60.9	13.0	85.2	2.4	1.4	6.5	3.00	7.31	.250	4.00	.313	1.98	
7X 3X .250/.438T	4X 3X .250/.438T	10.40	62.0	13.4	88.7	2.4	1.4	6.6	3.06	7.44	.250	3.00	.438	2.02	
8X 3X .250/.375T	4X 3X .250/.375T	10.64	69.8	14.4	107.4	2.7	1.5	7.5	3.13	8.38	.250	3.00	.375	2.25	
8X 4X .250/.313T	4X 3X .250/.313T	11.05	71.0	15.4	113.3	2.8	1.6	7.3	3.25	8.31	.250	4.00	.313	2.23	
8X 3X .250/.438T	4X 3X .250/.438T	11.25	72.1	15.8	117.6	2.8	1.6	7.4	3.31	8.44	.250	3.00	.438	2.27	
6X 5X .250/.375T	4X 3X .250/.375T	11.49	56.0	14.6	81.1	2.3	1.5	5.6	3.38	6.38	.250	5.00	.375	1.75	
8X 4X .250/.375T	4X 3X .250/.375T	11.90	73.7	17.3	126.4	2.9	1.7	7.3	3.50	8.38	.250	4.00	.375	2.25	
7X 5X .250/.375T	4X 3X .250/.375T	12.34	66.4	17.5	118.6	2.7	1.7	6.3	3.63	7.38	.250	5.00	.375	2.00	
6X 5X .250/.438T	4X 3X .250/.438T	12.55	58.0	16.5	98.7	2.4	1.6	5.5	3.69	6.44	.250	5.00	.438	1.77	
8X 4X .250/.438T	4X 3X .250/.438T	12.75	76.2	19.3	139.8	3.0	1.8	7.2	3.75	8.44	.250	4.00	.438	2.27	
8X 5X .250/.375T	4X 3X .250/.375T	13.19	76.9	20.4	145.3	3.1	1.9	7.1	3.88	8.38	.250	5.00	.375	2.25	
7X 5X .250/.438T	4X 3X .250/.438T	13.40	68.6	19.6	123.0	2.8	1.8	6.3	3.94	7.44	.250	5.00	.438	2.02	
6X 6X .250/.438T	4X 3X .250/.438T	14.04	60.0	19.2	102.6	2.5	1.7	5.4	4.13	6.44	.250	6.00	.438	1.77	
8X 5X .250/.438T	4X 3X .250/.438T	14.25	79.2	22.8	180.6	3.2	2.0	7.0	4.19	8.44	.250	5.00	.438	2.27	
9X 4X .313/.375T	4X 3X .313/.375T	14.65	84.0	21.6	171.7	3.3	2.0	8.0	4.31	9.38	.313	4.00	.375	3.13	
7X 6X .250/.438T	4X 3X .250/.438T	14.89	70.8	22.7	138.5	2.9	2.0	6.1	4.38	7.44	.250	6.00	.438	2.02	
9X 4X .313/.438T	4X 3X .313/.438T	15.50	86.4	23.7	187.4	3.4	2.2	7.9	4.56	9.44	.313	4.00	.438	3.15	
10X 4X .313/.375T	4X 3X .313/.375T	15.74	94.2	24.8	216.0	3.6	2.3	8.7	4.63	18.38	.313	4.00	.375	3.44	
8X 6X .250/.438T	4X 3X .250/.438T	15.95	87.2	25.0	198.1	3.4	2.2	7.8	4.69	9.38	.313	5.00	.438	2.27	
9X 5X .313/.375T	4X 3X .313/.375T	16.35	88.6	25.9	204.7	3.5	2.3	7.8	4.81	9.50	.313	4.00	.500	3.13	
10X 4X .313/.438T	4X 3X .313/.438T	16.59	96.8	27.2	234.7	3.8	2.4	8.6	4.88	18.44	.313	5.00	.438	3.46	
10X 5X .313/.375T	4X 3X .313/.375T	17.00	97.7	28.5	242.8	3.8	2.5	8.5	5.08	18.38	.313	5.00	.375	3.44	
9X 4X .313/.563T	4X 3X .313/.563T	17.20	90.7	28.1	218.3	3.6	2.4	7.8	5.06	9.56	.313	4.00	.563	3.19	
10X 4X .313/.500T	4X 3X .313/.500T	17.44	99.2	29.6	253.5	3.9	2.6	8.6	5.13	18.50	.313	4.00	.500	3.48	
10X 5X .313/.438T	4X 3X .313/.438T	18.05	100.4	31.4	265.8	3.9	2.6	8.4	5.31	18.44	.313	5.00	.438	3.66	

0.6250 - 5/8 in.



0.625 IN. PLATE (AREA= 11.72 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			DIMENSIONS			FLANGE			SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	FLANGE THICK	AREA
10X 4X .313/.563T	18.29	101.4	31.9	271.6	4.0	2.7	8.5	5.38	10.56	.313	4.00	.563	3.50
9X 6X .313/.438T	18.50	92.4	31.5	236.6	3.7	2.6	7.5	5.44	9.44	.313	6.00	.438	3.15
10X 5X .313/.500T	19.14	102.7	34.4	286.9	4.1	2.8	8.3	5.63	10.50	.313	5.00	.500	3.48
7X 7X .313/.500T	19.35	74.3	29.6	171.9	3.1	2.3	5.8	5.69	7.50	.313	7.00	.500	2.54
10X 6X .313/.438T	19.55	103.2	35.7	293.5	4.1	2.8	8.2	5.75	10.44	.313	6.00	.438	3.46
9X 6X .313/.500T	19.75	94.5	34.7	257.1	3.8	2.7	7.4	5.81	9.50	.313	6.00	.500	3.17
10X 5X .313/.563T	20.20	104.9	37.4	308.4	4.2	2.9	8.2	5.94	10.56	.313	5.00	.563	3.50
7X 7X .313/.563T	20.84	75.8	32.5	186.3	3.2	2.5	5.7	6.13	7.56	.313	7.00	.563	2.56
10X 6X .313/.500T	20.84	105.6	39.3	318.8	4.2	3.0	8.1	6.13	10.50	.313	6.00	.500	3.48
9X 7X .313/.500T	21.45	96.6	39.1	281.8	4.0	2.9	7.2	6.31	9.50	.313	7.00	.500	3.17
12X 4X .375/.469T	21.69	119.3	38.3	379.8	4.6	3.2	9.9	6.38	12.47	.375	4.00	.469	4.91
8X 7X .313/.563T	21.90	87.2	37.7	241.6	3.6	2.8	6.4	6.44	8.56	.313	7.00	.563	2.87
10X 6X .313/.563T	22.10	107.6	42.9	342.9	4.3	3.2	8.0	6.50	10.56	.313	6.00	.563	3.50
10X 7X .313/.500T	22.54	107.8	44.2	348.6	4.4	3.2	7.9	6.63	10.50	.313	7.00	.500	3.48
12X 4X .375/.531T	22.54	121.8	41.1	404.4	4.7	3.3	9.8	6.63	12.53	.375	4.00	.531	4.93
12X 5X .375/.469T	23.26	123.4	43.7	422.9	4.8	3.4	9.7	6.84	12.47	.375	5.00	.469	4.91
12X 4X .375/.594T	23.39	124.1	43.9	428.7	4.8	3.5	9.8	6.88	12.59	.375	4.00	.594	4.96
7X 7X .375/.625T	23.80	77.3	36.1	203.1	3.3	2.6	5.6	7.00	7.63	.375	7.00	.625	3.10
10X 7X .313/.563T	24.00	109.8	48.3	375.1	4.5	3.4	7.8	7.06	10.56	.313	7.00	.563	3.58
12X 4X .375/.656T	24.24	126.2	46.6	452.0	4.9	3.6	9.7	7.13	12.66	.375	4.00	.656	4.98
12X 5X .375/.531T	24.34	125.9	47.3	452.0	4.9	3.6	9.6	7.16	12.53	.375	5.00	.531	4.93
9X 8X .313/.563T	24.85	100.2	47.8	329.6	4.2	3.3	6.9	7.31	9.56	.313	8.00	.563	3.19
12X 6X .375/.469T	24.95	126.6	49.1	463.4	4.9	3.7	9.4	7.31	12.47	.375	6.00	.469	4.91
12X 5X .375/.594T	25.40	128.1	50.6	479.7	5.0	3.7	9.5	7.47	12.59	.375	5.00	.594	4.96
10X 8X .313/.563T	25.94	111.8	53.9	406.6	4.6	3.6	7.5	7.63	10.56	.313	8.00	.563	3.50
12X 6X .375/.531T	26.15	129.2	53.3	496.5	5.1	3.8	9.3	7.69	12.53	.375	6.00	.531	4.93
12X 5X .375/.656T	26.45	130.3	54.1	507.7	5.1	3.9	9.4	7.78	12.66	.375	5.00	.656	4.98
12X 7X .375/.469T	26.45	129.4	54.5	502.1	5.1	3.9	9.2	7.78	12.47	.375	7.00	.469	4.91
7X 7X .438/.688T	26.79	78.7	39.8	219.6	3.3	2.8	5.5	7.88	7.69	.438	7.00	.688	3.64
12X 6X .375/.594T	27.40	131.4	57.4	528.1	5.2	4.0	9.2	8.06	12.59	.375	6.00	.594	4.96
12X 7X .375/.531T	27.95	131.9	59.4	539.1	5.2	4.1	9.1	8.22	12.53	.375	7.00	.531	4.93
7X 7X .438/.750T	28.25	80.0	42.6	232.9	3.4	2.9	5.5	8.31	7.75	.438	7.00	.750	3.67
12X 6X .375/.656T	28.70	133.5	61.5	559.5	5.3	4.2	9.1	8.44	12.66	.375	6.00	.656	4.98
12X 7X .375/.594T	29.44	134.1	64.2	573.9	5.3	4.3	8.9	8.66	12.59	.375	7.00	.594	4.96
14X 5X .438/.531T	29.85	148.7	60.6	652.5	5.6	4.4	10.8	8.78	14.53	.438	5.00	.531	6.64
14X 5X .438/.594T	30.91	151.3	64.5	687.9	5.7	4.5	10.7	9.09	14.59	.438	5.00	.594	6.66
12X 7X .375/.656T	30.91	136.3	69.0	608.8	5.4	4.5	8.8	9.09	12.66	.375	7.00	.656	4.98
12X 8X .375/.594T	31.45	136.4	71.0	616.9	5.4	4.5	8.7	9.25	12.59	.375	8.00	.594	4.96
14X 6X .438/.531T	31.65	152.5	67.6	709.7	5.8	4.7	10.5	9.31	14.53	.438	6.00	.531	6.64
14X 5X .438/.656T	31.99	153.7	68.5	724.0	5.9	4.7	10.6	9.41	14.66	.438	5.00	.656	6.69
7X 7X .500/.875T	32.74	82.4	48.9	260.9	3.5	3.2	5.3	9.63	7.88	.500	7.00	.875	4.25
14X 6X .438/.594T	32.95	155.1	72.3	750.1	5.9	4.8	10.4	9.69	14.59	.438	6.00	.594	6.66
14X 5X .438/.719T	33.05	155.9	72.3	758.1	5.9	4.9	10.5	9.72	14.72	.438	5.00	.719	6.72
12X 8X .375/.656T	33.15	138.5	76.5	654.7	5.5	4.7	8.6	9.75	12.66	.375	8.00	.656	4.98
7X 6X .563/1.000T	33.80	83.2	48.4	263.9	3.5	3.2	5.5	9.94	8.00	.563	6.00	1.000	4.86

0.6250 - 5/8 in.

.625 IN. PLATE (AREA= 11.72 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS		INERTIA	R	YP	VF	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL				DEPTH	THICK	WIDTH	THICK
14X 6X .438/.656T	34.20	157.6	77.0	6.0	5.0	10.3	10.06	.438	6.00	.656
14X 7X .438/.594T	34.95	158.4	80.1	6.1	5.1	10.1	10.28	.438	7.00	.594
12X 9X .375/.656T	35.39	140.3	83.9	5.6	5.0	8.3	10.41	.375	9.00	.656
14X 6X .438/.719T	35.50	159.8	81.7	6.1	5.2	10.2	10.44	.438	6.00	.719
14X 7X .438/.656T	36.45	160.8	85.5	6.2	5.3	10.0	10.72	.438	7.00	.656
14X 8X .438/.594T	36.99	161.2	87.9	6.2	5.4	9.8	10.88	.438	8.00	.594
7X 7X .563/1.000T	37.20	84.7	54.8	3.6	3.4	5.2	10.94	.563	7.00	1.000
16X 5X .500/.594T	37.30	175.7	80.7	6.5	5.4	11.0	10.97	.500	5.00	.594
14X 7X .438/.719T	37.94	163.0	91.1	6.3	5.5	9.8	11.16	.438	7.00	.719
16X 5X .500/.656T	38.35	178.4	88.9	6.6	5.6	11.7	11.20	.500	5.00	.656
14X 8X .438/.656T	38.69	163.5	94.0	6.3	5.6	9.7	11.38	.438	8.00	.656
16X 6X .500/.594T	39.30	180.1	89.4	6.6	5.7	11.5	11.56	.500	6.00	.594
16X 5X .500/.719T	39.41	180.9	89.3	6.7	5.7	11.6	11.59	.500	5.00	.719
12X 9X .438/.719T	39.85	142.8	91.9	5.6	5.2	8.1	11.72	.438	9.00	.719
14X 8X .438/.719T	40.39	165.7	100.3	6.4	5.8	9.6	11.88	.438	8.00	.719
16X 6X .500/.656T	40.60	182.8	94.6	6.7	5.9	11.4	11.94	.500	6.00	.656
7X 7X .625/1.125T	41.65	86.9	60.6	3.6	3.6	5.2	12.25	.625	7.00	.594
16X 6X .500/.719T	41.85	185.4	98.9	6.8	6.1	11.3	12.31	.500	6.00	.719
16X 5X .500/.875T	42.09	186.5	100.1	6.9	6.1	11.4	12.38	.500	5.00	.875
12X 10X .438/.719T	42.30	144.5	100.0	5.7	5.5	7.9	12.44	.438	10.00	.719
16X 7X .500/.656T	42.81	186.7	108.2	6.9	6.2	11.1	12.59	.500	7.00	.656
14X 9X .438/.719T	42.81	168.0	109.6	6.5	6.1	9.3	12.59	.438	9.00	.719
16X 7X .500/.719T	44.38	189.2	110.4	7.0	6.4	11.0	13.03	.500	7.00	.719
16X 6X .500/.875T	45.05	191.1	112.8	7.1	6.5	11.0	13.25	.500	6.00	.875
16X 8X .500/.656T	45.05	189.9	113.8	7.0	6.5	10.8	13.25	.500	8.00	.656
14X 10X .438/.719T	45.25	170.8	118.0	6.5	6.3	9.0	13.31	.438	10.00	.719
7X 7X .688/1.250T	46.10	89.1	66.3	3.7	3.6	5.1	13.56	.688	7.00	1.250
16X 8X .500/.719T	46.75	192.5	120.9	7.1	6.7	10.7	13.75	.500	8.00	.719
16X 9X .500/.656T	47.29	192.8	123.4	7.1	6.7	10.5	13.91	.500	9.00	.656
18X 6X .563/.656T	47.80	209.7	114.6	7.4	6.8	12.5	14.06	.563	6.00	.656
16X 7X .500/.875T	48.04	194.9	125.5	7.2	6.9	10.6	14.13	.500	7.00	.875
18X 6X .563/.719T	49.10	212.6	128.5	7.5	7.0	12.3	14.44	.563	6.00	.719
16X 9X .500/.719T	49.20	195.3	131.3	7.2	7.0	10.4	14.47	.500	9.00	.719
16X 8X .500/.875T	51.00	198.2	138.2	7.3	7.2	10.3	15.00	.500	8.00	.875
18X 7X .563/.719T	51.54	217.0	132.1	7.7	7.3	12.0	15.16	.563	7.00	.719
16X 10X .500/.719T	51.65	197.8	141.7	7.3	7.2	10.1	15.19	.500	10.00	.719
18X 8X .563/.656T	52.29	217.9	135.9	7.7	7.4	11.9	15.38	.563	8.00	.656
14X 10X .500/.875T	53.55	176.1	148.2	6.6	6.9	8.6	15.75	.500	10.00	.875
16X 9X .500/.875T	53.99	200.9	150.8	7.4	7.5	10.0	15.88	.500	9.00	.875
18X 8X .563/.719T	53.99	220.9	143.6	7.8	7.6	11.7	15.88	.563	8.00	.719
18X 9X .563/.656T	54.50	221.3	146.4	7.8	7.7	11.6	16.03	.563	9.00	.656
18X 6X .563/1.000T	54.84	223.7	146.0	7.9	7.8	11.9	16.13	.563	6.00	1.000
18X 7X .563/.875T	55.25	223.6	148.7	7.9	7.8	11.7	16.25	.563	7.00	.875
18X 9X .563/.719T	56.41	224.3	155.1	7.9	7.9	11.4	16.59	.563	9.00	.719

0.6250 - 5/8 in.



.625 IN. PLATE (AREA= 11.72 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL							WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X10X .500/ .875T	56.95	203.3	163.3	1505.1	7.5	7.8	9.7	16.75	16.80	.500	10.00	.875	6.75
18X10X .563/ .719T	58.85	227.3	166.7	1860.3	8.0	8.2	11.2	17.31	18.72	.563	10.80	.719	10.09
18X 8X .563/1.000T	61.64	232.0	177.8	1975.5	8.1	8.5	11.1	18.13	19.80	.563	8.00	1.000	11.05
18X11X .563/ .875T	67.15	236.3	204.3	2137.5	8.2	9.0	18.5	19.75	18.88	.563	11.00	.875	10.98
18X10X .563/1.000T	68.44	238.2	209.4	2187.2	8.3	9.2	10.4	20.13	19.00	.563	10.00	1.000	11.05
18X12X .563/ .875T	70.14	238.6	210.8	2221.9	8.3	9.3	10.2	20.53	18.88	.563	12.00	.875	10.98
18X 9X .625/1.125T	72.69	242.4	213.6	2242.9	8.2	9.3	10.5	21.38	19.13	.625	9.80	1.125	12.35
21X 9X .688/ .875T	75.85	281.4	222.3	2795.1	9.1	9.9	12.6	22.31	21.88	.688	9.80	.875	15.48
21X10X .688/ .875T	78.85	285.3	238.2	2921.5	9.1	10.2	12.3	23.19	21.88	.688	10.80	.875	15.48
21X 8X .688/1.125T	79.78	288.1	240.6	2982.9	9.2	10.4	12.4	23.44	22.13	.688	8.00	1.125	15.66
21X11X .688/ .875T	81.80	288.9	253.9	3041.3	9.2	10.5	12.0	24.06	22.13	.688	11.00	.875	15.48
21X 9X .688/1.125T	83.50	292.5	268.5	3135.1	9.3	10.7	12.8	24.56	22.13	.688	9.00	1.125	15.66
21X12X .688/ .875T	84.80	292.0	269.7	3155.2	9.3	10.8	11.7	24.94	21.88	.688	12.00	.875	15.48
21X10X .688/1.125T	87.35	296.3	280.3	3277.7	9.4	11.1	11.7	25.69	22.13	.688	10.00	1.125	15.66
21X13X .688/ .875T	87.75	294.9	285.1	3262.3	9.3	11.1	11.4	25.81	21.88	.688	13.00	.875	15.48
24X10X .750/ .875T	98.95	338.6	287.1	3962.8	10.1	11.7	13.8	26.75	24.88	.750	10.00	.875	19.13
24X 8X .750/1.125T	91.80	341.6	289.8	4037.7	10.2	11.8	13.9	27.00	25.13	.750	8.00	1.125	19.32
24X11X .750/ .875T	93.94	342.9	304.6	4114.3	10.2	12.0	13.5	27.63	24.88	.750	11.00	.875	19.13
24X 9X .750/1.125T	95.64	347.0	312.1	4232.0	10.3	12.2	13.6	28.13	25.13	.750	9.00	1.125	19.32
24X12X .750/ .875T	96.90	346.9	322.2	4260.5	10.3	12.3	13.2	28.50	24.88	.750	12.00	.875	19.13
24X10X .750/1.125T	99.45	351.9	334.5	4416.9	10.4	12.6	13.2	29.25	25.13	.750	10.00	1.125	19.32
24X13X .750/ .875T	99.89	350.5	348.1	4402.3	10.3	12.6	12.9	29.38	24.88	.750	13.00	.875	19.13
21X14X .688/1.125T	102.65	308.0	359.7	3775.8	9.5	12.3	10.5	30.19	22.13	.688	14.00	1.125	15.66
21X15X .688/1.125T	106.45	310.3	379.4	3883.8	9.5	12.5	10.2	31.31	22.13	.688	15.00	1.125	15.66
24X12X .750/1.125T	107.10	368.2	379.1	4756.9	10.5	13.2	12.5	31.50	25.13	.750	12.00	1.125	19.32
24X13X .750/1.125T	110.94	363.7	401.5	4915.1	10.5	13.5	12.2	32.63	25.13	.750	13.00	1.125	19.32
27X 9X .875/1.500T	126.24	433.6	444.9	6395.6	11.4	14.7	14.4	37.13	28.50	.875	9.00	1.500	25.48
27X10X .875/1.375T	127.89	433.6	452.0	6419.0	11.4	14.8	14.2	37.38	28.50	.875	10.00	1.375	25.38
27X13X .875/1.125T	130.05	435.1	474.7	6527.8	11.4	15.0	13.8	38.25	28.13	.875	13.00	1.125	25.16
27X10X .875/1.500T	131.34	439.9	477.1	6665.4	11.5	15.2	14.8	38.63	28.50	.875	10.00	1.500	25.48
27X11X .875/1.375T	131.75	439.2	481.7	6663.9	11.5	15.2	13.8	38.75	28.38	.875	11.00	1.375	25.38
27X14X .875/1.125T	133.89	439.3	499.3	6720.0	11.5	15.3	13.5	39.38	28.13	.875	14.00	1.125	25.16
27X15X .875/1.125T	137.70	443.2	523.4	6901.4	11.5	15.6	13.2	40.50	28.13	.875	15.00	1.125	25.16
27X13X .875/1.500T	146.64	455.0	573.3	7388.1	11.6	16.2	12.9	43.13	28.50	.875	13.80	1.500	25.48
30X10X1.000/1.375T	148.75	513.6	531.6	8360.3	12.3	16.3	15.7	43.75	31.38	1.000	10.00	1.375	32.01
30X10X1.000/1.500T	153.00	521.1	559.1	8664.9	12.4	16.6	15.5	45.00	31.50	1.000	10.00	1.500	32.13
30X11X1.000/1.375T	153.44	520.6	564.1	8664.7	12.3	16.6	15.4	45.13	31.38	1.000	11.00	1.375	32.01
30X10X1.000/1.750T	161.50	535.1	613.1	9250.0	12.5	17.3	15.1	47.50	31.75	1.000	10.00	1.750	32.38

0.6250 - 5/8 in.

608 IN. PLATE (AREA= 14.16 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM		FLANGE		SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X .125/.188T	13.3	1.9	6.3	.7	.5	3.4	.75	3.19	.125	2.00	.188	.48	
4X 2X .125/.188T	20.4	2.5	10.9	.8	.5	4.3	.88	4.19	.125	2.00	.188	.61	
3X 2X .188/.250T	15.9	2.4	8.3	.7	.5	3.4	1.06	3.25	.188	2.00	.250	.74	
3X 2X .188/.313T	17.8	2.9	9.8	.8	.6	3.4	1.19	3.31	.188	2.00	.313	.74	
3X 3X .188/.250T	19.2	3.3	11.1	.8	.6	3.4	1.31	3.25	.188	3.00	.250	.94	
4X 2X .188/.313T	26.7	3.9	17.1	1.0	.6	4.4	1.38	4.31	.188	2.00	.313	.94	
5X 2X .188/.313T	33.6	4.4	23.2	1.2	.7	5.2	1.44	5.25	.188	2.00	.250	1.12	
5X 2X .188/.313T	36.4	5.0	26.6	1.3	.7	5.3	1.56	5.31	.188	2.00	.313	1.13	
6X 2X .188/.313T	46.9	6.4	39.1	1.6	.8	6.2	1.75	6.31	.188	2.00	.313	1.32	
6X 3X .188/.250T	49.2	7.2	43.4	1.6	.9	6.1	1.88	6.25	.188	3.00	.250	1.30	
4X 4X .188/.313T	34.6	6.6	27.7	1.3	.8	4.2	2.00	4.31	.188	4.00	.313	.94	
6X 3X .188/.313T	52.7	8.3	50.0	1.8	.9	6.0	2.06	6.31	.188	3.00	.313	1.32	
5X 4X .188/.313T	45.7	8.4	42.4	1.6	.9	5.1	2.19	5.31	.188	4.00	.313	1.13	
6X 4X .188/.313T	57.3	10.3	60.9	1.9	1.1	5.9	2.38	6.31	.188	4.00	.313	1.32	
5X 3X .250/.438T	47.2	9.1	46.8	1.7	1.0	5.1	2.56	5.44	.250	3.00	.438	1.53	
7X 3X .250/.438T	64.8	11.0	75.2	2.1	1.2	6.8	2.69	7.31	.250	3.00	.313	2.00	
6X 3X .250/.438T	58.9	11.3	67.4	2.0	1.1	6.0	2.81	6.44	.250	3.00	.438	1.78	
7X 3X .250/.375T	67.9	12.3	83.9	2.2	1.2	6.8	2.88	7.38	.250	3.00	.375	2.02	
8X 3X .250/.375T	76.4	13.1	100.6	2.4	1.3	7.7	2.94	8.31	.250	3.00	.313	2.25	
7X 4X .250/.375T	69.3	13.2	88.7	2.3	1.3	6.7	3.00	7.31	.250	4.00	.313	2.00	
7X 3X .250/.438T	70.6	13.5	92.4	2.3	1.3	6.8	3.06	7.44	.250	3.00	.438	2.03	
8X 4X .250/.375T	81.2	15.6	118.0	2.6	1.5	7.5	3.25	8.31	.250	3.00	.375	2.27	
8X 3X .250/.438T	82.6	16.0	122.4	2.6	1.5	7.6	3.31	8.44	.250	3.00	.438	2.20	
6X 5X .250/.375T	64.0	14.8	84.9	2.2	1.3	5.7	3.38	6.38	.250	5.00	.375	1.77	
8X 4X .250/.375T	84.6	17.6	131.9	2.7	1.6	7.5	3.50	8.38	.250	4.00	.375	2.27	
7X 5X .250/.375T	76.3	17.7	115.7	2.5	1.5	6.6	3.63	7.38	.250	5.00	.375	2.02	
6X 5X .250/.438T	66.6	16.7	95.2	2.3	1.4	5.7	3.69	6.44	.250	5.00	.438	1.78	
8X 4X .250/.438T	87.8	19.6	146.1	2.9	1.7	7.5	3.75	8.44	.250	4.00	.438	2.28	
8X 5X .250/.375T	88.7	20.7	152.0	2.9	1.7	7.4	3.88	8.38	.250	5.00	.375	2.27	
7X 5X .250/.438T	79.2	19.9	129.0	2.7	1.6	6.5	3.94	7.44	.250	5.00	.438	2.03	
6X 6X .250/.438T	69.2	19.4	108.0	2.4	1.6	5.6	4.13	6.44	.250	6.00	.438	1.78	
8X 5X .250/.438T	91.7	23.1	168.4	3.0	1.8	7.3	4.19	8.44	.250	5.00	.438	2.28	
9X 4X .313/.375T	96.9	21.9	179.6	3.1	1.9	8.2	4.31	9.38	.313	4.00	.375	3.15	
7X 6X .250/.438T	82.0	22.9	145.7	2.8	1.8	6.4	4.38	7.44	.250	6.00	.438	2.03	
9X 4X .313/.438T	100.0	24.0	196.3	3.2	2.0	8.2	4.56	9.44	.313	4.00	.438	3.17	
10X 4X .313/.375T	109.1	25.1	226.0	3.5	2.1	9.0	4.63	10.38	.313	4.00	.375	3.46	
8X 6X .250/.438T	94.8	26.6	189.7	3.2	2.0	7.1	4.63	8.44	.250	6.00	.438	2.28	
9X 5X .313/.375T	101.0	25.3	203.6	3.3	2.0	8.1	4.69	9.38	.313	5.00	.375	3.15	
9X 4X .313/.500T	102.8	26.2	212.7	3.3	2.1	8.1	4.81	9.50	.313	4.00	.500	3.19	
10X 4X .313/.438T	112.3	27.5	246.1	3.6	2.2	8.9	4.88	10.44	.313	4.00	.438	3.48	
10X 5X .313/.375T	113.5	28.9	254.8	3.6	2.2	8.8	5.00	10.38	.313	5.00	.375	3.46	
9X 4X .313/.563T	105.4	28.4	229.5	3.5	2.2	8.1	5.06	9.56	.313	4.00	.563	3.21	
10X 4X .313/.500T	115.3	30.0	266.2	3.7	2.3	8.9	5.13	10.50	.313	4.00	.500	3.50	
10X 5X .313/.438T	116.8	31.9	278.6	3.8	2.4	8.7	5.31	10.44	.313	5.00	.438	3.48	

0.6875 - 11/16 in.



.688 IN. PLATE (AREA= 14.18 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	INERTIA	WEB THICK						WIDTH	FLANGE THICK	THICK	
10X 4X .313/ .563T	18.29	118.0	32.4	285.7	3.8	2.4	8.8	5.36	10.56	3.13	4.00	.563	3.52	
9X 6X .313/ .438T	19.50	107.5	31.9	249.4	3.6	2.3	7.8	5.44	9.44	3.13	6.00	.438	3.17	
10X 5X .313/ .500T	19.14	119.7	34.9	302.3	3.9	2.5	8.7	5.63	10.50	3.13	5.00	.500	3.50	
7X 7X .313/ .500T	19.35	86.5	30.0	182.2	3.0	2.1	6.1	5.69	7.50	3.13	7.00	.500	2.56	
10X 6X .313/ .438T	19.55	120.3	36.2	309.5	3.9	2.6	8.6	5.75	10.44	3.13	6.00	.438	3.48	
9X 6X .313/ .500T	19.75	110.2	35.2	271.6	3.7	2.5	7.7	5.81	9.50	3.13	6.00	.500	3.19	
10X 5X .313/ .563T	20.20	122.4	37.9	325.5	4.0	2.7	8.6	5.94	10.56	3.13	5.00	.563	3.52	
7X 7X .313/ .563T	20.84	88.5	33.0	198.1	3.1	2.2	6.0	6.13	7.56	3.13	7.00	.563	2.58	
10X 6X .313/ .500T	20.84	123.3	39.8	336.9	4.1	2.7	8.5	6.13	10.50	3.13	6.00	.500	3.50	
9X 7X .313/ .500T	21.45	112.9	39.6	298.7	3.8	2.6	7.5	6.31	9.50	3.13	7.00	.500	3.19	
12X 4X .375/ .469T	21.69	138.9	38.9	400.0	4.4	2.9	10.3	6.38	12.47	3.75	4.00	.469	4.93	
8X 7X .313/ .563T	21.90	102.0	38.2	256.8	3.5	2.5	6.7	6.44	8.56	3.13	7.00	.563	2.89	
10X 6X .313/ .563T	22.10	125.9	43.4	363.2	4.2	2.9	8.4	6.50	10.56	3.13	6.00	.563	3.52	
10X 7X .313/ .500T	22.54	126.2	44.7	369.6	4.2	2.9	8.3	6.63	10.50	3.13	7.00	.500	3.50	
12X 4X .375/ .531T	22.54	141.9	41.8	426.5	4.5	3.0	10.2	6.63	12.53	3.75	5.00	.531	4.96	
12X 5X .375/ .469T	23.26	143.8	44.4	446.6	4.6	3.1	10.1	6.84	12.47	3.75	5.00	.469	4.93	
12X 4X .375/ .594T	23.39	144.7	44.6	452.8	4.6	3.1	10.1	6.88	12.59	3.75	4.00	.594	4.98	
7X 7X .375/ .625T	23.80	90.3	36.6	216.8	3.2	2.4	5.9	7.00	7.63	3.75	7.00	.625	3.12	
10X 7X .313/ .563T	24.00	128.7	48.9	398.7	4.3	3.1	8.2	7.06	10.56	3.13	7.00	.563	3.52	
24.24	147.3	47.3	48.0	478.0	4.7	3.2	10.1	7.13	12.66	3.75	4.00	.656	5.81	
12X 5X .375/ .531T	24.34	146.9	48.0	478.1	4.7	3.3	10.0	7.16	12.53	3.75	5.00	.531	4.96	
24.85	117.5	48.4	48.4	351.5	4.0	3.0	7.3	7.31	9.56	3.13	8.00	.563	3.21	
12X 6X .375/ .469T	24.85	147.9	49.9	490.6	4.8	3.3	9.8	7.31	12.47	3.75	6.00	.469	4.93	
25.40	149.7	51.4	50.8	508.2	4.8	3.4	9.9	7.47	12.59	3.75	5.00	.594	4.98	
10X 8X .313/ .563T	25.94	131.2	54.6	433.5	4.5	3.3	7.9	7.63	10.56	3.13	8.00	.563	3.52	
12X 6X .375/ .531T	26.15	151.0	54.1	526.7	4.9	3.5	9.7	7.69	12.53	3.75	6.00	.531	4.96	
26.45	152.3	54.9	53.8	538.8	5.0	3.5	9.8	7.78	12.66	3.75	5.00	.656	5.81	
12X 7X .375/ .469T	26.45	151.3	55.3	532.9	4.9	3.5	9.6	7.78	12.47	3.75	7.00	.469	4.93	
7X 7X .438/ .688T	26.79	92.0	40.4	235.2	3.3	2.6	5.8	7.88	7.69	4.38	7.00	.688	3.67	
12X 6X .375/ .594T	27.40	153.7	58.3	561.2	5.0	3.7	9.6	8.06	12.59	3.75	6.00	.594	4.98	
12X 7X .375/ .531T	27.95	154.4	60.3	573.4	5.1	3.7	9.5	8.22	12.53	3.75	7.00	.531	4.96	
28.25	93.6	43.3	62.5	595.7	5.1	3.8	9.5	8.31	7.75	4.38	7.00	.750	3.78	
12X 6X .375/ .656T	28.70	156.3	62.5	595.7	5.1	3.8	9.5	8.44	12.66	3.75	6.00	.656	5.01	
12X 7X .375/ .594T	29.44	157.1	65.2	611.8	5.2	3.9	9.4	8.66	12.59	3.75	7.00	.594	4.98	
29.85	173.4	61.7	692.4	5.5	4.0	4.0	11.2	8.78	14.53	4.38	5.00	.531	6.67	
14X 5X .438/ .531T	30.91	176.4	65.6	730.9	5.6	4.1	11.1	9.09	14.59	4.38	5.00	.594	6.69	
12X 7X .375/ .656T	30.91	159.7	70.1	650.3	5.3	4.1	9.3	9.09	12.66	3.75	7.00	.656	5.01	
31.45	159.9	72.0	659.5	5.3	4.1	9.2	9.25	9.25	12.59	3.75	8.00	.594	4.98	
14X 6X .438/ .531T	31.65	178.0	68.8	754.8	5.7	4.2	11.0	9.31	14.53	4.38	6.00	.531	6.67	
31.99	179.4	69.7	770.3	5.7	4.3	4.3	11.1	9.41	14.66	4.38	5.00	.656	6.72	
7X 7X .500/ .875T	32.74	96.5	49.8	281.3	3.4	2.9	5.7	9.63	7.88	5.00	7.00	.875	4.28	
14X 6X .438/ .594T	32.95	181.1	73.5	799.0	5.8	4.4	10.9	9.69	14.59	4.38	6.00	.594	6.69	
14X 5X .438/ .719T	33.05	182.0	73.6	807.5	5.8	4.4	11.0	9.72	14.72	4.38	5.00	.719	6.75	
12X 8X .375/ .656T	33.15	162.4	77.7	701.4	5.4	4.3	9.0	9.75	12.66	3.75	8.00	.656	5.81	
33.80	97.2	49.4	284.4	3.4	2.9	5.8	9.94	9.94	8.00	5.63	6.00	1.000	4.89	

0.6875 - 11/16 in.

-688 IN. PLATE (AREA= 14.18 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM		FLANGE		SHEAR
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
14X 6X .438/.656T	34.20	184.0	78.3	843.4	5.9	18.8	10.06	14.66	.438	6.00	.656	6.72
14X 7X .438/.594T	34.95	185.0	81.5	864.0	5.9	10.6	10.28	14.59	.438	7.00	.594	6.69
12X 9X .375/.656T	35.39	164.7	85.2	749.4	5.5	8.8	10.41	12.66	.375	9.00	.656	5.01
14X 6X .438/.719T	35.50	186.7	83.1	886.2	6.0	10.7	10.44	14.72	.438	6.00	.719	6.75
14X 7X .438/.656T	36.45	187.9	87.0	912.7	6.1	10.5	10.72	14.66	.438	7.00	.656	6.72
14X 8X .438/.594T	36.99	188.4	89.4	926.3	6.1	10.4	10.88	14.59	.438	8.00	.594	6.69
7X 7X .563/1.000T	37.20	99.2	56.0	310.8	3.5	5.1	5.6	10.94	.563	7.00	1.000	4.89
16X 5X .500/.594T	37.30	204.3	82.4	1014.5	6.4	5.0	12.3	10.97	.500	5.00	.594	8.64
14X 7X .438/.719T	37.94	198.6	92.7	960.6	6.2	5.0	10.4	11.16	.438	7.00	.719	6.75
16X 5X .500/.656T	38.35	207.4	86.7	1060.6	6.5	5.1	12.2	11.28	.500	5.00	.656	8.67
14X 8X .438/.656T	38.69	191.2	95.7	978.6	6.2	5.1	10.2	11.38	.438	8.00	.656	6.72
16X 6X .500/.594T	39.30	209.5	91.2	1098.2	6.5	5.2	12.0	11.56	.500	6.00	.594	8.64
16X 5X .500/.719T	39.41	210.4	91.1	1107.1	6.6	5.3	12.1	11.59	.500	5.00	.719	8.70
12X 9X .438/.719T	39.85	167.4	93.4	804.1	5.6	4.8	8.6	11.72	.438	9.00	.719	5.87
14X 8X .438/.719T	40.39	193.8	102.1	1030.0	6.3	5.3	10.1	11.88	.438	8.00	.719	6.75
16X 6X .500/.656T	40.60	212.8	96.6	1152.1	6.6	5.4	11.9	11.94	.500	6.00	.656	8.67
16X 7X .500/.594T	41.34	214.0	108.1	1178.4	6.7	5.5	11.8	12.16	.500	7.00	.594	8.64
7X 7X .625/1.125T	41.65	101.8	61.9	339.4	3.6	3.3	5.5	12.25	.625	7.00	1.125	5.51
16X 6X .500/.719T	41.85	215.8	101.9	1204.8	6.7	5.6	11.8	12.31	.500	6.00	.719	8.70
16X 5X .500/.875T	42.09	217.1	102.2	1220.4	6.8	5.6	11.9	12.38	.500	5.00	.875	8.78
12X 10X .438/.719T	42.30	169.5	101.7	852.4	5.7	5.0	8.4	12.44	.438	10.00	.719	5.87
16X 7X .500/.656T	42.81	217.3	106.3	1238.0	6.8	5.7	11.6	12.59	.500	7.00	.656	8.67
14X 9X .438/.719T	42.81	196.7	111.5	1096.4	6.4	5.6	9.8	12.59	.438	9.00	.719	6.75
16X 7X .500/.719T	44.30	220.3	112.6	1296.8	6.9	5.9	11.5	13.03	.500	7.00	.719	8.70
16X 6X .500/.875T	45.05	222.5	115.1	1332.3	7.0	6.0	11.6	13.25	.500	6.00	.875	8.78
16X 8X .500/.656T	45.05	221.2	116.0	1319.9	6.9	6.0	11.4	13.25	.500	8.00	.656	8.67
14X 10X .438/.719T	45.25	199.1	120.9	1158.9	6.5	5.8	9.6	13.31	.438	10.00	.719	6.75
7X 7X .688/1.250T	46.10	104.3	67.8	367.4	3.6	3.5	5.4	13.56	.688	7.00	1.250	6.15
16X 8X .500/.719T	46.75	224.2	123.3	1384.5	7.0	6.2	11.2	13.75	.500	8.00	.719	8.70
16X 9X .500/.656T	47.29	224.6	125.8	1398.8	7.1	6.2	11.1	13.91	.500	9.00	.656	8.67
18X 6X .563/.656T	47.80	243.0	117.2	1529.5	7.4	6.3	11.1	14.06	.563	6.00	.656	10.89
16X 7X .500/.875T	48.04	227.0	128.1	1438.3	7.1	6.3	11.2	14.13	.500	7.00	.875	8.78
18X 6X .563/.719T	49.10	246.4	123.2	1594.1	7.5	6.5	12.9	14.44	.563	6.00	.719	10.93
16X 9X .500/.719T	49.20	227.6	133.9	1467.2	7.2	6.4	11.0	14.47	.500	9.00	.719	8.70
16X 8X .500/.875T	51.00	230.9	148.9	1537.3	7.3	6.7	10.9	15.00	.500	8.00	.875	8.78
18X 7X .563/.719T	51.54	251.5	135.0	1704.9	7.6	6.8	12.6	15.16	.563	7.00	.719	10.93
16X 10X .500/.719T	51.65	230.5	144.5	1546.4	7.3	6.7	10.7	15.19	.500	10.00	.719	8.70
18X 8X .563/.656T	52.29	252.6	138.9	1734.0	7.7	6.9	12.5	15.38	.563	8.00	.656	10.89
14X 10X .500/.875T	53.55	205.7	142.9	1312.9	6.6	6.4	9.2	15.75	.500	10.00	.875	7.78
16X 9X .500/.875T	53.99	234.2	153.8	1631.0	7.4	7.0	10.6	15.88	.500	9.00	.875	8.78
18X 8X .563/.719T	53.99	256.0	146.7	1810.4	7.8	7.1	12.3	15.88	.563	8.00	.719	10.93
18X 9X .563/.656T	54.50	256.5	149.6	1828.4	7.8	7.1	12.2	16.03	.563	9.00	.656	10.89
18X 6X .563/1.000T	54.84	259.2	149.3	1865.1	7.8	7.2	12.5	16.13	.563	6.00	1.000	11.08
18X 7X .563/.875T	55.25	259.2	152.0	1875.1	7.8	7.2	12.3	16.25	.563	7.00	.875	11.02
18X 9X .563/.719T	56.41	260.8	158.5	1910.8	7.9	7.3	12.1	16.59	.563	9.00	.719	10.93

0.6875 - 11/16 in.



0.688 IN. PLATE (AREA= 14.18 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL							WEB THICK	FLANGE WIDTH	THICK	
16X10X .500/.875T	56.95	237.0	166.6	1719.3	7.5	7.3	10.3	16.75	16.88	.500	10.00	.875	8.78
18X10X .563/.719T	58.85	263.5	170.3	2007.5	8.0	7.6	11.0	17.31	18.72	.563	10.00	.719	10.93
18X 8X .563/1.000T	61.64	269.0	181.7	2135.3	8.1	7.9	11.7	18.13	19.00	.563	8.00	1.000	11.08
18X11X .563/.875T	67.15	274.1	208.8	2318.8	8.3	8.5	11.1	19.75	18.88	.563	11.00	.875	11.02
18X10X .563/1.000T	68.44	276.2	214.1	2374.4	8.3	8.6	11.1	20.13	19.00	.563	10.00	1.000	11.08
18X12X .563/.875T	70.14	276.7	222.7	2418.8	8.3	8.7	10.8	20.63	18.88	.563	12.00	.875	11.02
18X 9X .625/1.125T	72.69	280.2	218.6	2433.6	8.3	8.7	11.1	21.38	19.13	.625	9.00	1.125	12.39
21X 9X .688/.875T	75.85	323.1	227.9	3013.6	9.1	9.3	13.2	22.31	21.88	.688	9.00	.875	15.53
21X10X .688/.875T	78.85	327.6	244.1	3156.4	9.2	9.6	12.9	23.19	21.88	.688	10.00	.875	15.53
21X 8X .688/1.125T	79.70	330.7	246.6	3223.4	9.3	9.7	13.1	23.44	22.13	.688	8.00	1.125	15.70
21X11X .688/.875T	81.80	331.6	260.2	3299.3	9.3	9.9	12.6	24.06	21.88	.688	11.00	.875	15.53
21X 9X .688/1.125T	83.50	335.7	267.0	3393.6	9.4	10.1	12.7	24.56	22.13	.688	9.00	1.125	15.70
21X12X .688/.875T	84.80	335.2	276.3	3410.0	9.3	10.2	12.4	24.94	21.88	.688	12.00	.875	15.53
21X10X .688/1.125T	87.35	340.1	287.3	3553.6	9.4	10.4	12.4	25.69	22.13	.688	10.00	1.125	15.70
21X13X .688/.875T	87.75	338.5	292.1	3538.4	9.4	10.5	12.1	25.81	21.88	.688	13.00	.875	15.53
24X10X .750/.875T	90.95	385.9	294.7	4272.7	10.2	11.1	14.5	26.75	24.88	.750	10.00	.875	19.18
24X 8X .750/1.125T	91.80	389.3	297.5	4353.9	10.3	11.2	14.6	27.00	25.13	.750	8.00	1.125	19.36
24X11X .750/.875T	93.94	390.8	312.6	4440.5	10.3	11.4	14.2	27.63	24.88	.750	11.00	.875	19.18
24X 9X .750/1.125T	95.64	395.4	320.4	4569.3	10.4	11.6	14.3	28.13	25.13	.750	9.00	1.125	19.36
24X12X .750/.875T	96.90	395.3	330.6	4603.0	10.4	11.6	13.9	28.50	24.88	.750	12.00	.875	19.18
24X10X .750/1.125T	99.45	400.9	343.3	4775.5	10.5	11.9	13.9	29.25	25.13	.750	10.00	1.125	19.36
24X13X .750/.875T	99.89	399.4	348.9	4761.0	10.5	11.9	13.6	29.38	24.88	.750	13.00	.875	19.18
21X14X .688/1.125T	102.65	353.5	368.7	4117.7	9.6	11.6	11.2	30.19	22.13	.688	14.00	1.125	15.70
21X15X .688/1.125T	106.45	356.1	388.8	4241.0	9.7	11.9	10.9	31.31	22.13	.688	15.00	1.125	15.70
24X12X .750/1.125T	107.10	410.2	359.0	5155.1	10.6	12.6	13.3	31.50	25.13	.750	12.00	1.125	19.36
24X13X .750/1.125T	110.94	414.3	412.0	5332.8	10.7	12.9	12.9	32.63	25.13	.750	13.00	1.125	19.36
27X 9X .875/1.500T	126.24	488.7	457.4	6895.3	11.6	14.1	15.1	37.13	28.50	.875	9.00	1.500	25.54
27X10X .875/1.375T	127.09	488.8	464.6	6923.4	11.6	14.2	14.9	37.38	28.38	.875	10.00	1.375	25.43
27X13X .875/1.125T	130.05	490.4	487.7	7046.6	11.6	14.4	14.4	38.25	28.13	.875	13.00	1.125	25.22
27X10X .875/1.500T	131.34	495.7	490.4	7194.8	11.7	14.5	14.7	38.63	28.50	.875	10.00	1.500	25.54
27X11X .875/1.375T	131.75	495.0	495.1	7198.7	11.7	14.5	14.5	38.75	28.38	.875	11.00	1.375	25.43
27X14X .875/1.125T	133.89	495.2	512.9	7260.0	11.6	14.7	14.2	39.38	28.13	.875	14.00	1.125	25.22
27X15X .875/1.125T	137.70	499.5	537.6	7461.2	11.7	14.9	13.9	40.50	28.13	.875	15.00	1.125	25.22
27X13X .875/1.500T	146.64	512.5	589.1	7998.2	11.8	15.6	13.6	43.13	28.50	.875	13.00	1.500	25.54
30X10X1.000/1.375T	148.75	573.3	546.8	8974.7	12.4	15.7	16.4	43.75	31.38	1.000	10.00	1.375	32.07
30X10X1.000/1.500T	153.00	581.6	575.0	9306.7	12.5	16.0	16.2	45.00	31.50	1.000	10.00	1.500	32.19
30X11X1.000/1.375T	153.44	581.0	581.0	9307.9	12.5	16.0	16.0	45.13	31.38	1.000	11.00	1.375	32.07
30X10X1.000/1.750T	161.50	596.8	630.6	9945.4	12.7	16.7	15.8	47.50	31.75	1.000	10.00	1.750	32.44

0.6875 - 11/16 in.

.750 IN. PLATE (AREA= 16.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
3X 2X	4X 2X	WT/FT	ZPL	ZFL						WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .125/ .188T	4X 2X .125/ .188T	2.55	13.8	1.9	.6	.5	3.5	.75	3.19	.125	2.00	.188	.49
4X 2X .125/ .188T	5X 2X .125/ .188T	2.99	21.1	2.6	.8	.5	4.4	.88	4.19	.125	2.00	.188	.62
3X 2X .188/ .250T	4X 2X .188/ .250T	3.60	16.6	2.5	.7	.5	3.5	1.06	3.25	.188	2.00	.250	.75
3X 2X .188/ .313T	4X 2X .188/ .313T	4.05	18.7	3.0	.8	.6	3.5	1.19	3.31	.188	2.00	.313	.76
3X 3X .188/ .250T	4X 3X .188/ .250T	4.45	20.2	3.4	.8	.6	3.4	1.31	3.25	.188	3.00	.250	.75
4X 2X .188/ .313T	5X 2X .188/ .313T	4.69	28.2	4.0	1.0	.6	4.4	1.38	4.31	.188	2.00	.313	.95
5X 2X .188/ .250T	6X 2X .188/ .250T	4.90	35.7	4.5	1.1	.7	5.3	1.44	5.25	.188	2.00	.250	1.13
5X 2X .188/ .313T	6X 2X .188/ .313T	5.30	38.8	5.1	1.2	.7	5.4	1.56	5.31	.188	2.00	.313	1.14
6X 2X .188/ .250T	7X 2X .188/ .250T	5.95	50.6	6.4	1.5	.8	6.3	1.75	6.31	.188	2.00	.250	1.33
6X 3X .188/ .313T	7X 3X .188/ .313T	6.39	53.4	7.3	1.5	.8	6.2	1.88	6.25	.188	3.00	.313	1.32
4X 4X .188/ .313T	5X 4X .188/ .313T	6.80	37.4	6.7	1.2	.8	4.3	2.00	4.31	.188	4.00	.313	.95
6X 3X .188/ .313T	7X 3X .188/ .313T	7.00	57.6	8.4	1.7	.9	6.2	2.06	6.31	.188	3.00	.313	1.33
5X 4X .188/ .313T	6X 4X .188/ .313T	7.45	49.9	8.5	1.5	.9	5.2	2.19	5.31	.188	4.00	.313	1.14
6X 4X .188/ .313T	7X 4X .188/ .313T	8.09	63.1	10.4	1.8	1.0	6.1	2.38	6.31	.188	4.00	.313	1.33
5X 3X .250/ .438T	6X 3X .250/ .438T	8.70	51.9	9.3	1.6	.9	5.3	2.56	5.44	.250	3.00	.438	1.55
7X 3X .250/ .313T	8X 3X .250/ .313T	9.15	71.7	11.1	2.0	1.1	7.0	2.69	7.31	.250	3.00	.313	2.02
6X 3X .250/ .438T	7X 3X .250/ .438T	9.55	65.2	11.4	1.9	1.1	6.1	2.81	6.44	.250	3.00	.438	1.60
7X 3X .250/ .313T	8X 3X .250/ .313T	9.79	75.5	12.4	2.1	1.1	7.0	2.88	7.38	.250	3.00	.313	2.03
8X 3X .250/ .313T	9X 3X .250/ .313T	10.00	85.1	13.3	2.3	1.2	7.8	2.94	8.31	.250	3.00	.313	2.27
7X 4X .250/ .313T	8X 4X .250/ .313T	10.20	77.2	13.4	2.1	1.2	6.9	3.00	7.31	.250	4.00	.313	2.02
8X 3X .250/ .438T	9X 3X .250/ .438T	10.40	78.8	13.7	2.2	1.2	7.0	3.06	7.44	.250	3.00	.438	2.05
8X 3X .250/ .313T	9X 3X .250/ .313T	10.64	89.2	14.7	2.4	1.3	7.8	3.13	8.38	.250	3.00	.313	2.28
8X 4X .250/ .313T	9X 4X .250/ .313T	11.05	91.1	15.8	2.5	1.3	7.7	3.25	8.31	.250	4.00	.313	2.27
8X 3X .250/ .438T	9X 3X .250/ .438T	11.25	92.7	16.2	2.5	1.4	7.8	3.31	8.44	.250	3.00	.438	2.30
6X 5X .250/ .313T	7X 5X .250/ .313T	11.49	71.6	15.0	2.1	1.2	5.9	3.38	6.38	.250	5.00	.313	1.78
8X 4X .250/ .313T	9X 4X .250/ .313T	11.90	95.3	17.8	2.6	1.4	7.7	3.50	8.38	.250	4.00	.313	2.28
7X 5X .250/ .313T	8X 5X .250/ .313T	12.34	86.0	17.9	2.4	1.4	6.7	3.63	7.38	.250	5.00	.313	2.03
6X 5X .250/ .438T	7X 5X .250/ .438T	12.55	74.9	16.9	2.2	1.3	5.9	3.69	6.44	.250	5.00	.438	1.80
8X 4X .250/ .438T	9X 4X .250/ .438T	12.75	99.2	19.8	2.7	1.5	7.7	3.75	8.44	.250	4.00	.438	2.30
8X 5X .250/ .313T	9X 5X .250/ .313T	13.19	100.4	20.9	2.8	1.6	7.6	3.88	8.38	.250	5.00	.313	2.28
7X 5X .250/ .438T	8X 5X .250/ .438T	13.40	89.5	20.1	2.5	1.5	6.7	3.94	7.44	.250	5.00	.438	2.05
6X 6X .250/ .438T	7X 6X .250/ .438T	14.04	78.3	19.6	2.3	1.4	5.7	4.13	6.44	.250	6.00	.438	1.80
8X 5X .250/ .438T	9X 5X .250/ .438T	14.25	104.1	23.3	2.9	1.7	7.5	4.19	8.44	.250	5.00	.438	2.30
9X 4X .313/ .375T	10X 4X .313/ .375T	14.65	109.8	22.1	3.0	1.7	8.4	4.31	9.38	.313	4.00	.375	3.17
7X 6X .313/ .438T	8X 6X .313/ .438T	14.89	93.1	23.2	2.7	1.6	6.6	4.38	7.44	.250	6.00	.438	2.05
9X 4X .313/ .375T	10X 4X .313/ .375T	15.50	113.6	24.3	3.1	1.8	8.4	4.56	9.44	.313	4.00	.375	3.19
10X 4X .313/ .375T	11X 4X .313/ .375T	15.74	124.8	25.4	3.3	1.9	9.2	4.63	10.38	.313	4.00	.375	3.48
8X 6X .250/ .438T	9X 6X .250/ .438T	15.74	108.1	26.9	3.0	1.8	7.4	4.63	8.44	.250	6.00	.438	2.30
9X 5X .313/ .375T	10X 5X .313/ .375T	15.95	114.9	26.6	3.1	1.8	8.3	4.69	9.38	.313	5.00	.375	3.17
9X 4X .313/ .500T	10X 4X .313/ .500T	16.35	117.0	26.5	3.2	1.9	8.4	4.81	9.50	.313	4.00	.500	3.21
10X 4X .313/ .375T	11X 4X .313/ .375T	16.59	128.0	27.9	3.4	2.0	9.2	4.88	10.44	.313	4.00	.375	3.50
10X 5X .313/ .375T	11X 5X .313/ .375T	17.00	129.5	29.2	3.5	2.0	9.1	5.00	10.38	.313	5.00	.375	3.48
9X 4X .313/ .563T	10X 4X .313/ .563T	17.20	120.2	28.8	3.3	2.0	8.3	5.06	9.56	.313	4.00	.563	3.23
10X 4X .313/ .500T	11X 4X .313/ .500T	17.44	131.7	30.3	3.6	2.1	9.1	5.13	10.50	.313	4.00	.500	3.52
10X 5X .313/ .438T	11X 5X .313/ .438T	18.05	133.5	32.2	3.6	2.2	9.0	5.31	10.44	.313	5.00	.438	3.50

0.7500 - 3/4 in.



SECTION MODULUS				DIMENSIONS				FLANGE				SHEAR	
NOMINAL SIZE				WEB				THICK				AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WIDTH	THICK	AREA	SHEAR
18.29	135.0	32.8	298.1	3.7	2.2	9.1	5.38	10.56	.313	4.00	.563	3.54	
18.50	123.0	32.3	260.7	3.4	2.1	8.1	5.44	9.44	.313	6.00	.438	3.19	
19.14	137.2	35.3	315.8	3.7	2.3	8.9	5.63	10.50	.313	5.00	.500	3.52	
19.35	99.0	30.3	191.5	2.9	1.9	6.3	5.69	7.50	.313	7.00	.500	2.58	
19.55	137.9	36.6	323.6	3.8	2.3	8.8	5.75	10.44	.313	6.00	.438	3.50	
19.75	126.4	35.6	284.5	3.5	2.3	8.0	5.81	9.50	.313	6.00	.500	3.21	
20.20	140.5	38.3	340.7	3.9	2.4	8.9	5.94	10.56	.313	5.00	.563	3.54	
20.84	101.5	33.4	208.6	3.0	2.1	6.3	6.13	7.56	.313	7.00	.563	2.60	
20.84	141.6	40.3	352.9	3.9	2.5	8.8	6.13	10.50	.313	6.00	.500	3.52	
21.45	129.7	40.0	313.7	3.7	2.4	7.8	6.31	9.50	.313	7.00	.500	3.23	
21.69	159.2	39.5	418.0	4.2	2.6	10.6	6.38	12.47	.375	4.00	.469	4.96	
21.90	117.2	38.6	270.4	3.4	2.3	7.0	6.44	8.56	.313	7.00	.563	2.91	
22.10	144.9	43.9	381.2	4.0	2.6	8.7	6.50	10.56	.313	6.00	.563	3.54	
22.54	145.2	45.3	388.2	4.1	2.7	8.6	6.63	10.50	.313	7.00	.500	3.52	
22.54	162.8	42.3	446.2	4.4	2.7	10.5	6.63	12.53	.375	4.00	.531	4.98	
23.26	165.2	45.0	467.6	4.4	2.8	10.4	6.84	12.47	.375	5.00	.469	4.96	
23.39	166.2	45.2	474.2	4.5	2.9	10.5	6.88	12.59	.375	4.00	.594	5.00	
23.80	103.7	37.1	229.1	3.1	2.2	6.2	7.00	7.63	.375	7.00	.625	3.14	
24.00	148.4	49.5	419.6	4.2	2.8	8.5	7.06	10.56	.313	7.00	.563	3.54	
24.24	169.3	48.0	501.1	4.6	3.0	10.4	7.13	12.66	.375	5.00	.531	4.98	
24.34	168.9	48.6	501.3	4.6	3.0	10.3	7.16	12.53	.375	5.00	.531	4.98	
24.85	135.5	49.8	371.0	3.9	2.7	7.6	7.31	9.56	.313	6.00	.563	3.23	
24.85	170.1	50.5	514.8	4.6	3.0	10.2	7.31	12.47	.375	6.00	.469	4.96	
25.40	172.2	52.1	533.6	4.7	3.1	10.2	7.47	12.59	.375	5.00	.594	5.00	
25.94	151.5	55.2	457.6	4.3	3.0	8.3	7.63	10.56	.313	8.00	.563	3.54	
26.15	173.8	54.8	553.6	4.7	3.2	10.1	7.69	12.53	.375	6.00	.531	4.98	
26.45	175.4	55.6	566.5	4.8	3.2	10.2	7.78	12.66	.375	5.00	.656	5.03	
26.45	174.2	56.8	560.4	4.8	3.2	10.0	7.78	12.47	.375	7.00	.469	4.96	
26.79	105.8	41.0	249.2	3.2	2.4	6.1	7.88	7.69	.438	7.00	.680	3.70	
27.40	177.2	59.1	590.9	4.9	3.3	10.0	8.06	12.59	.375	6.00	.594	5.00	
27.95	178.0	61.1	604.2	4.9	3.4	9.9	8.22	12.53	.375	7.00	.531		

0.7500 - 3/4 in.

.750 IN. PLATE (AREA= 16.88 SQ. IN.)

NOMINAL SIZE			SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	THICK	SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA											
14X 6X .438/.656T	34.20	212.1	79.5	891.2	5.8	4.2	11.2	10.06	14.66	.438	6.00	.656	6.75	6.75
14X 7X .438/.656T	34.95	213.3	82.7	913.8	5.8	4.3	11.1	10.20	14.59	.438	7.00	.594	6.72	6.72
12X 9X .375/.656T	35.39	190.7	86.3	796.6	5.4	4.2	9.2	10.41	12.66	.375	9.00	.656	5.03	5.03
14X 6X .438/.719T	35.50	215.3	84.4	937.7	5.9	4.4	11.1	10.44	14.72	.438	6.00	.719	6.78	6.78
14X 7X .438/.656T	36.45	216.8	88.3	966.8	5.9	4.5	11.0	10.72	14.66	.438	7.00	.656	6.75	6.75
14X 8X .438/.594T	36.99	217.4	90.7	981.8	5.9	4.5	10.8	10.88	14.59	.438	8.00	.594	6.72	6.72
7X 7X .563/1.000T	37.20	114.5	56.9	332.6	3.5	2.9	5.8	10.94	8.00	.563	7.00	1.000	4.93	4.93
16X 5X .500/.594T	37.30	234.8	83.8	1071.1	6.2	4.6	12.8	10.97	16.59	.500	5.00	.594	8.67	8.67
14X 7X .438/.719T	37.94	220.0	94.0	1019.1	6.0	4.6	10.8	11.16	14.72	.438	7.00	.719	6.78	6.78
16X 5X .500/.656T	38.35	238.5	88.2	1120.8	6.3	4.7	12.7	11.28	16.66	.500	5.00	.656	8.71	8.71
14X 8X .438/.656T	38.69	220.7	97.1	1039.0	6.1	4.7	10.7	11.38	14.66	.438	8.00	.656	6.75	6.75
16X 6X .500/.594T	39.30	241.0	92.8	1161.6	6.4	4.8	12.5	11.56	16.59	.500	6.00	.594	8.67	8.67
16X 5X .500/.719T	39.41	242.0	92.7	1171.0	6.4	4.8	12.6	11.59	16.72	.500	5.00	.719	8.74	8.74
12X 9X .438/.719T	39.85	193.6	94.8	857.1	5.5	4.4	9.0	11.72	12.72	.438	9.00	.719	5.90	5.90
14X 8X .438/.719T	40.39	223.9	103.6	1095.3	6.2	4.9	10.6	11.88	14.72	.438	8.00	.719	6.78	6.78
16X 6X .500/.556T	40.60	244.7	98.2	1220.0	6.5	5.0	12.4	11.94	16.66	.500	6.00	.556	8.71	8.71
16X 7X .500/.594T	41.34	246.2	101.8	1248.8	6.6	5.1	12.3	12.16	16.59	.500	7.00	.594	8.67	8.67
7X 7X .625/1.125T	41.65	117.4	63.1	364.4	3.5	3.1	5.8	12.25	8.13	.625	7.00	1.125	5.55	5.55
16X 6X .500/.719T	41.85	248.3	103.6	1277.2	6.6	5.1	12.3	12.31	16.72	.500	6.00	.719	8.74	8.74
16X 5X .500/.875T	42.09	249.0	103.9	1293.0	6.7	5.2	12.4	12.38	16.88	.500	5.00	.875	8.82	8.82
12X 10X .438/.719T	42.30	196.2	103.2	918.8	5.6	4.6	8.8	12.44	12.72	.438	10.00	.719	5.98	5.98
16X 7X .500/.656T	42.81	250.1	108.0	1313.5	6.7	5.3	12.2	12.59	16.66	.500	7.00	.656	8.71	8.71
14X 9X .438/.719T	42.81	227.3	113.2	1168.7	6.3	5.1	10.3	12.59	14.72	.438	9.00	.719	6.78	6.78
16X 7X .500/.719T	44.30	253.7	114.4	1377.7	6.8	5.4	12.0	13.03	16.72	.500	7.00	.719	8.74	8.74
16X 6X .500/.875T	45.05	256.2	117.0	1416.1	6.9	5.5	12.1	13.25	16.88	.500	6.00	.875	8.82	8.82
16X 8X .500/.656T	45.05	254.7	117.9	1403.2	6.8	5.5	11.9	13.25	16.66	.500	8.00	.656	8.71	8.71
14X 10X .438/.719T	45.25	230.2	122.7	1238.0	6.4	5.4	10.1	13.31	14.72	.438	10.00	.719	6.78	6.78
7X 7X .688/1.250T	46.10	120.3	69.2	395.5	3.6	3.3	5.7	13.56	8.25	.688	7.00	1.250	6.19	6.19
16X 8X .500/.719T	46.75	258.3	125.3	1473.9	6.9	5.7	11.8	13.75	16.72	.500	8.00	.719	8.74	8.74
16X 9X .500/.656T	47.29	258.7	127.9	1499.9	7.0	5.8	11.7	13.91	16.66	.500	9.00	.656	8.71	8.71
18X 6X .563/.656T	47.80	278.7	119.4	1622.7	7.2	5.8	13.6	14.06	18.66	.563	6.00	.656	10.93	10.93
16X 7X .500/.875T	48.04	261.6	130.2	1532.7	7.0	5.9	11.8	14.13	16.88	.500	7.00	.875	8.82	8.82
18X 6X .563/.719T	49.10	282.6	125.6	1692.7	7.4	6.0	13.5	14.47	18.72	.563	6.00	.719	10.96	10.96
16X 9X .500/.719T	49.20	262.3	136.1	1565.1	7.1	6.0	11.5	14.47	16.72	.500	9.00	.719	8.74	8.74
16X 8X .500/.875T	51.00	266.1	143.3	1642.0	7.2	6.2	11.5	15.00	16.88	.500	8.00	.875	8.82	8.82
18X 7X .563/.719T	51.54	286.6	137.5	1813.6	7.5	6.3	13.2	15.16	18.72	.563	7.00	.719	10.96	10.96
16X 10X .500/.719T	51.65	265.8	146.9	1652.7	7.2	6.2	11.3	15.19	16.72	.500	10.00	.719	8.74	8.74
18X 8X .563/.656T	52.29	289.9	141.5	1845.6	7.6	6.4	13.0	15.38	18.66	.563	8.00	.656	10.93	10.93
14X 10X .500/.875T	53.55	237.7	145.3	1409.1	6.6	5.9	9.7	15.75	14.88	.500	10.00	.875	7.82	7.82
16X 9X .500/.719T	53.99	270.0	156.4	1746.1	7.3	6.5	11.2	15.88	18.88	.500	9.00	.719	10.96	10.96
18X 8X .563/.719T	53.99	293.9	149.4	1928.8	7.7	6.6	12.9	15.88	18.72	.563	8.00	.719	10.96	10.96
18X 9X .563/.656T	54.50	294.5	152.4	1949.0	7.7	6.6	12.8	16.03	18.66	.563	9.00	.656	10.93	10.93
18X 6X .563/1.000T	54.84	297.5	152.1	1988.1	7.8	6.7	13.1	16.13	19.00	.563	6.00	1.000	11.12	11.12
14X 7X .563/.875T	55.25	297.5	154.9	1999.6	7.8	6.7	12.9	16.25	18.88	.563	7.00	.875	11.05	11.05
16X 9X .563/.719T	56.41	298.5	161.4	2039.4	7.8	6.8	12.6	16.59	18.72	.563	9.00	.719	10.96	10.96

0.7500 - 3/4 in.



.750 IN. PLATE (AREA= 16.00 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			INERTIA	R	YP	VF	AREA	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	MODULUS						DEPTH	WEB THICK	FLANGE WIDTH	THICK
16X10X .500/.875T	56.95	273.4	169.3	163.5	7.4	6.7	10.9	16.75	16.00	.500	10.00	.075	0.02
16X10X .563/.719T	58.85	302.6	173.4	216.2	7.9	7.1	12.4	17.31	18.72	.563	10.00	.719	10.96
18X 8X .563/1.000T	61.64	308.9	185.1	226.4	8.1	7.4	12.3	10.13	19.00	.563	8.00	1.000	11.12
18X11X .563/.875T	67.15	314.9	212.6	249.5	8.2	7.9	11.7	19.75	10.00	.563	11.00	.875	11.05
18X10X .563/1.000T	68.44	317.4	218.0	252.8	8.3	8.0	11.7	20.13	19.00	.563	10.00	1.000	11.12
18X12X .563/.875T	70.14	318.0	226.8	259.0	8.3	8.2	11.5	20.63	10.00	.563	12.00	.875	11.05
18X 9X .625/1.125T	72.69	321.2	223.0	261.6	8.3	8.1	11.7	21.38	19.13	.625	9.00	1.125	12.43
21X 9X .688/.875T	75.85	368.3	232.8	322.7	9.1	8.8	13.9	22.31	21.00	.688	9.00	.875	15.57
21X10X .688/.875T	78.85	373.4	249.3	338.2	9.2	9.1	13.6	23.19	21.00	.688	10.00	.875	15.57
21X 8X .688/1.125T	79.78	376.8	252.8	345.3	9.3	9.2	13.7	23.44	22.13	.688	8.00	1.125	15.74
21X11X .688/.875T	81.88	378.0	265.7	353.8	9.3	9.3	13.3	24.06	21.00	.688	11.00	.875	15.57
21X 9X .688/1.125T	83.50	382.6	272.0	363.8	9.4	9.5	13.4	24.56	22.13	.688	9.00	1.125	15.74
21X12X .688/.875T	84.80	382.1	282.1	367.2	9.4	9.6	13.0	24.94	21.00	.688	12.00	.875	15.57
21X10X .688/1.125T	87.35	387.6	293.5	382.1	9.5	9.9	13.8	25.69	22.13	.688	10.00	1.125	15.74
21X13X .688/.875T	87.75	385.9	298.2	386.7	9.4	9.9	12.8	25.61	21.00	.688	13.00	.875	15.57
24X10X .750/.875T	90.95	437.4	301.5	457.4	10.2	10.5	15.2	26.75	24.00	.750	10.00	.875	19.22
24X 8X .750/1.125T	91.80	441.1	304.5	466.2	10.3	10.6	15.3	27.00	25.13	.750	8.00	1.125	19.41
24X11X .750/.875T	93.94	442.9	319.7	479.9	10.3	10.7	14.9	27.63	24.00	.750	11.00	.875	19.22
24X10X .750/1.125T	95.64	448.8	327.8	489.2	10.4	10.9	14.9	28.13	25.13	.750	9.00	1.125	19.41
24X12X .750/.875T	96.90	447.9	338.1	498.3	10.4	11.0	14.6	28.50	24.00	.750	12.00	.875	19.22
24X10X .750/1.125T	99.45	454.2	351.2	512.9	10.5	11.3	14.6	29.25	25.13	.750	10.00	1.125	19.41
24X13X .750/.875T	99.89	452.6	356.7	512.9	10.5	11.3	14.3	29.38	24.00	.750	13.00	.875	19.22
21X14X .688/1.125T	102.65	403.0	376.6	443.9	9.7	11.1	11.8	30.19	22.13	.688	14.00	1.125	15.74
21X15X .688/1.125T	106.45	406.0	397.1	459.3	9.8	11.3	11.6	31.31	22.13	.688	15.00	1.125	15.74
24X12X .750/1.125T	107.10	464.8	397.9	551.7	10.7	11.9	13.9	31.50	25.13	.750	12.00	1.125	19.41
24X13X .750/1.125T	110.94	469.3	421.3	574.6	10.8	12.2	13.6	32.63	25.13	.750	13.00	1.125	19.41
27X 9X .875/1.500T	126.24	548.8	468.8	739.6	11.7	13.5	15.8	37.13	28.50	.875	9.00	1.500	25.59
27X10X .875/1.375T	127.09	548.9	476.1	742.6	11.7	13.5	15.6	37.38	28.38	.875	10.00	1.375	25.49
27X13X .875/1.125T	130.05	550.8	499.5	758.5	11.7	13.7	15.1	38.25	28.13	.875	13.00	1.125	25.27
27X10X .875/1.500T	131.34	556.5	502.6	772.4	11.8	13.9	15.4	38.63	28.50	.875	10.00	1.500	25.59
27X11X .875/1.375T	131.75	555.8	507.3	772.7	11.8	13.9	15.2	38.75	28.38	.875	11.00	1.375	25.49
27X14X .875/1.125T	133.89	556.0	525.3	780.7	11.8	14.0	14.9	39.38	28.13	.875	14.00	1.125	25.27
27X15X .875/1.125T	137.70	560.9	550.5	802.3	11.8	14.3	14.6	40.50	28.13	.875	15.00	1.125	25.27
27X13X .875/1.500T	146.64	575.2	603.6	861.4	12.0	15.8	17.3	43.13	31.50	.875	13.00	1.500	25.59
30X10X1.000/1.375T	148.75	638.4	561.0	959.4	12.6	15.8	14.1	43.75	31.38	1.000	10.00	1.375	32.13
30X10X1.000/1.500T	153.00	647.5	589.9	994.9	12.7	15.4	16.9	45.00	31.50	1.000	10.00	1.500	32.25
30X11X1.000/1.375T	153.44	646.9	595.0	997.7	12.7	15.4	16.7	45.13	31.38	1.000	11.00	1.375	32.13
30X10X1.000/1.750T	161.50	664.1	646.9	1065.0	12.9	16.0	16.5	47.50	31.75	1.000	10.00	1.750	32.50

0.7500 - 3/4 in.

.875 IN. PLATE (AREA= 22.97 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	BEAM DIMENSIONS		SHEAR AREA
3X 2X	WT/FT	ZPL	ZFL	INERTIA	INERTIA		DEPTH	THICK	
3X 2X .125/ .188T	2.55	14.7	2.2	7.7	7.7	.6	AREA	MEB	THICK
4X 2X .125/ .188T	2.99	22.3	2.8	12.5	12.5	.7	3.19	.125	.188
3X 2X .188/ .250T	3.60	17.9	2.8	9.9	9.9	.6	.88	.125	.188
3X 2X .188/ .313T	4.05	20.1	3.2	11.6	11.6	.7	3.25	.188	.250
3X 3X .188/ .250T	4.45	21.9	3.7	13.0	13.0	.7	3.31	.188	.313
4X 2X .188/ .313T	4.69	20.5	4.2	19.3	19.3	.9	3.25	.188	.250
5X 2X .188/ .250T	4.98	38.7	4.7	25.7	25.7	1.0	4.31	.188	.313
5X 2X .188/ .313T	5.30	42.5	5.4	29.4	29.4	1.1	4.31	.188	.250
6X 2X .188/ .313T	5.95	56.2	6.7	42.8	42.8	1.3	5.25	.188	.313
6X 3X .188/ .250T	6.39	59.9	7.5	47.4	47.4	1.4	6.31	.188	.250
4X 4X .188/ .313T	6.80	41.9	7.0	31.1	31.1	1.1	6.31	.188	.313
6X 3X .188/ .313T	7.00	65.3	8.6	54.8	54.8	1.5	4.31	.188	.313
5X 4X .188/ .313T	7.45	56.8	8.7	46.9	46.9	1.4	6.31	.188	.313
6X 4X .188/ .313T	8.09	72.9	10.7	66.8	66.8	1.6	5.31	.188	.313
5X 3X .250/ .313T	8.70	59.7	9.6	52.0	52.0	1.4	6.31	.188	.313
7X 3X .250/ .313T	9.15	83.6	11.4	82.3	82.3	1.8	2.38	.250	.313
6X 3X .250/ .438T	9.55	76.2	11.7	74.3	74.3	1.7	2.69	.250	.313
7X 3X .250/ .375T	9.79	88.7	12.7	92.0	92.0	1.9	2.81	.250	.313
8X 3X .250/ .313T	10.00	100.6	13.6	109.9	109.9	2.1	6.44	.250	.313
7X 4X .250/ .438T	10.20	91.2	13.7	97.4	97.4	1.9	8.31	.250	.313
7X 4X .250/ .375T	10.40	93.3	14.0	101.5	101.5	2.0	7.31	.250	.313
8X 3X .250/ .375T	10.64	106.2	15.1	122.2	122.2	2.2	3.06	.250	.313
8X 4X .250/ .313T	11.05	109.0	16.2	129.2	129.2	2.2	3.13	.250	.313
8X 3X .250/ .438T	11.25	111.2	16.5	134.2	134.2	2.3	8.31	.250	.313
6X 5X .250/ .375T	11.49	85.4	15.3	94.4	94.4	1.9	8.44	.250	.313
8X 4X .250/ .375T	11.90	115.0	18.1	145.0	145.0	2.3	6.38	.250	.313
7X 5X .250/ .375T	12.34	103.7	18.3	128.1	128.1	2.2	8.38	.250	.313
6X 5X .250/ .438T	12.55	90.2	17.3	106.2	106.2	2.0	7.38	.250	.313
8X 4X .250/ .438T	12.75	120.5	20.2	161.1	161.1	2.5	6.44	.250	.313
7X 5X .250/ .438T	13.19	122.4	21.3	168.0	168.0	2.5	8.44	.250	.313
6X 6X .250/ .438T	14.04	95.2	20.1	121.3	121.3	2.1	3.88	.250	.313
8X 5X .250/ .438T	14.25	127.9	23.8	186.9	186.9	2.6	8.44	.250	.313
9X 4X .250/ .438T	14.65	134.6	22.6	198.5	198.5	2.7	9.38	.250	.313
7X 6X .250/ .438T	14.89	114.4	23.7	163.1	163.1	2.4	7.44	.250	.313
9X 4X .313/ .438T	15.50	140.0	24.9	217.7	217.7	2.8	8.44	.250	.313
10X 4X .313/ .438T	15.74	153.2	26.0	250.0	250.0	3.0	9.44	.250	.313
8X 6X .313/ .438T	15.74	133.9	27.4	212.0	212.0	2.8	10.38	.250	.313
9X 5X .313/ .438T	15.95	141.9	26.1	226.2	226.2	2.9	8.44	.250	.313
9X 4X .313/ .500T	16.35	144.9	27.1	236.6	236.6	2.9	9.38	.250	.313
10X 4X .313/ .438T	16.59	150.9	28.4	273.0	273.0	3.1	9.44	.250	.313
10X 5X .313/ .438T	17.00	161.1	29.8	283.2	283.2	3.2	10.44	.250	.313
9X 4X .313/ .563T	17.20	149.5	31.0	256.2	256.2	3.0	10.38	.250	.313
10X 4X .313/ .500T	17.44	164.2	31.4	296.3	296.3	3.2	9.56	.250	.313
10X 5X .313/ .438T	18.05	166.9	32.9	310.9	310.9	3.3	10.50	.250	.313

0.8750 - 7/8 in.



.875 IN. PLATE (AREA= 22.97 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	YF	AREA		DEPTH	WEB		FLANGE		SHEAR AREA
WT/FI	ZPL	ZFL	INERTIA	INERTIA				AREA	THICK		THICK	WIDTH	THICK	THICK	
10X 4X .313/ .563T	18.29	168.9	33.4	319.0	3.4	1.9	9.5	5.38	10.56	10.56	.313	4.00	.563	.563	3.58
9X 6X .313/ .438T	18.50	153.8	32.9	279.9	3.1	1.8	8.5	5.44	9.44	9.44	.313	6.00	.438	.438	3.23
10X 5X .313/ .500T	19.14	172.2	36.0	338.7	3.4	2.0	9.4	5.63	10.50	10.50	.313	5.00	.500	.500	3.56
7X 7X .313/ .438T	19.35	123.6	31.0	207.4	2.7	1.7	6.7	5.69	7.50	7.50	.313	7.00	.438	.438	2.62
10X 6X .313/ .500T	19.55	173.5	37.3	347.4	3.5	2.0	9.3	5.75	10.44	10.44	.313	6.00	.500	.500	3.54
9X 6X .313/ .500T	19.75	158.8	36.3	306.3	3.3	1.9	8.4	5.81	9.50	9.50	.313	6.00	.500	.500	3.25
10X 5X .313/ .563T	20.20	177.0	39.1	366.2	3.6	2.1	9.4	5.94	10.56	10.56	.313	5.00	.563	.563	3.58
7X 7X .313/ .563T	20.84	127.5	34.1	226.7	2.8	1.8	6.7	6.13	7.56	7.56	.313	7.00	.563	.563	2.64
10X 6X .313/ .500T	20.84	178.9	41.1	380.0	3.6	2.1	9.3	6.13	10.50	10.50	.313	6.00	.500	.500	3.56
9X 7X .313/ .500T	21.45	164.0	40.8	339.1	3.4	2.1	8.3	6.31	9.50	9.50	.313	7.00	.500	.500	3.25
12X 4X .375/ .469T	21.69	200.6	40.3	448.3	3.9	2.2	11.1	6.38	12.47	12.47	.375	4.00	.469	.469	5.00
8X 7X .313/ .563T	21.90	148.0	39.4	293.5	3.2	2.0	7.5	6.44	8.56	8.56	.313	7.00	.563	.563	2.95
10X 6X .313/ .563T	22.10	183.7	44.8	411.7	3.7	2.2	9.2	6.50	10.56	10.56	.313	6.00	.563	.563	3.58
10X 7X .313/ .500T	22.54	184.4	46.1	419.6	3.8	2.3	9.1	6.63	10.50	10.50	.313	7.00	.500	.500	3.56
12X 4X .375/ .531T	22.54	205.7	43.3	479.3	4.0	2.3	11.1	6.63	12.53	12.53	.375	4.00	.531	.531	5.03
12X 5X .375/ .469T	23.26	209.1	46.0	503.1	4.1	2.4	10.9	6.84	12.47	12.47	.375	5.00	.469	.469	5.00
12X 4X .375/ .594T	23.39	210.5	46.2	510.3	4.1	2.4	11.0	6.88	12.59	12.59	.375	4.00	.594	.594	5.05
7X 7X .375/ .625T	23.80	130.8	38.0	258.3	2.9	1.9	6.6	7.00	7.63	7.63	.375	7.00	.625	.625	3.19
10X 7X .313/ .563T	24.00	189.1	50.4	455.2	3.9	2.4	9.0	7.06	10.56	10.56	.313	7.00	.563	.563	3.58
12X 4X .375/ .656T	24.24	214.8	49.0	540.2	4.2	2.5	11.0	7.13	12.66	12.66	.375	4.00	.656	.656	5.08
12X 5X .375/ .531T	24.34	214.5	49.7	540.7	4.2	2.5	10.9	7.16	12.53	12.53	.375	5.00	.531	.531	5.03
9X 8X .313/ .563T	24.85	172.8	49.9	455.3	3.7	2.3	8.1	7.31	9.56	9.56	.313	8.00	.563	.563	3.27
12X 6X .375/ .469T	25.40	219.2	51.6	585.9	4.3	2.6	10.8	7.47	12.47	12.47	.375	5.00	.469	.469	5.00
12X 5X .375/ .594T	25.40	219.2	53.2	576.7	4.4	2.6	10.8	7.47	12.59	12.59	.375	5.00	.594	.594	5.05
10X 8X .313/ .563T	25.94	193.9	56.2	498.5	4.0	2.6	8.9	7.63	10.56	10.56	.313	8.00	.563	.563	3.58
12X 6X .375/ .531T	26.15	221.6	56.8	599.3	4.4	2.7	10.7	7.69	12.53	12.53	.375	6.00	.531	.531	5.03
12X 5X .375/ .656T	26.45	223.8	56.9	613.6	4.5	2.7	10.8	7.78	12.66	12.66	.375	5.00	.656	.656	5.08
12X 7X .375/ .469T	26.45	222.2	57.2	607.1	4.4	2.7	10.6	7.78	12.47	12.47	.375	7.00	.469	.469	5.00
7X 7X .438/ .688T	26.79	133.9	42.0	273.7	3.0	2.0	6.5	7.88	7.69	7.69	.438	7.00	.688	.688	3.75
12X 6X .375/ .594T	27.40	226.5	60.3	641.3	4.5	2.8	10.6	8.06	12.59	12.59	.375	6.00	.594	.594	5.05
12X 7X .375/ .531T	27.95	227.7	62.4	656.5	4.6	2.9	10.5	8.22	12.53	12.53	.375	7.00	.531	.531	5.03
7X 7X .438/ .750T	28.25	136.9	45.0	292.2	3.1	2.1	6.5	8.31	7.75	7.75	.438	7.00	.750	.750	3.78
12X 6X .375/ .656T	28.70	230.9	64.6	603.6	4.7	3.0	10.6	8.44	12.66	12.66	.375	6.00	.656	.656	5.08
12X 7X .375/ .594T	29.44	232.5	67.4	703.8	4.7	3.0	10.4	8.66	12.59	12.59	.375	7.00	.594	.594	5.05
14X 5X .438/ .531T	29.85	254.4	64.2	709.3	5.0	3.1	12.3	9.09	14.53	14.53	.438	5.00	.531	.531	6.75
14X 5X .438/ .594T	30.91	259.5	68.3	835.8	5.1	3.2	12.2	9.09	14.59	14.59	.438	5.00	.594	.594	6.77
12X 7X .375/ .656T	30.91	237.1	72.5	751.6	4.8	3.2	10.4	9.09	12.66	12.66	.375	7.00	.656	.656	5.08
12X 8X .375/ .594T	31.45	237.6	74.5	783.6	4.9	3.2	10.3	9.25	12.59	12.59	.375	8.00	.594	.594	5.05
14X 6X .438/ .531T	31.65	262.1	71.5	855.2	5.2	3.3	12.1	9.31	14.53	14.53	.438	6.00	.531	.531	6.75
14X 5X .438/ .656T	31.99	264.3	72.5	803.6	5.2	3.3	12.2	9.41	14.66	14.66	.438	5.00	.656	.656	6.80
7X 7X .500/ .875T	32.74	142.1	51.9	932.7	3.2	2.3	6.4	9.63	7.88	7.88	.500	7.00	.875	.875	4.38
14X 6X .438/ .594T	32.95	267.2	76.4	919.2	5.3	3.4	12.0	9.69	14.59	14.59	.438	6.00	.594	.594	6.77
14X 5X .438/ .719T	33.05	268.7	76.5	929.0	5.3	3.5	12.1	9.72	14.72	14.72	.438	5.00	.719	.719	6.83
12X 8X .375/ .656T	33.15	242.1	80.3	816.4	5.0	3.4	10.2	9.75	12.66	12.66	.375	8.00	.656	.656	5.08
7X 6X .563/1.000T	33.80	142.7	51.6	336.5	3.2	2.4	6.5	9.94	8.80	8.80	.563	6.00	1.000	1.000	5.08

0.8750 - 7/8 in.

.....

0.8750 - 7/8 in.



0.875 IN. PLATE (AREA= 22.97 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL						WEB THICK	WIDTH	FLANGE THICK	
16X10X .500/ .875T	56.95	353.3	173.9	2069.0	7.2	5.9	11.9	16.75	.500	10.00	.875	8.88
18X10X .563/ .719T	58.85	388.7	178.5	2396.7	7.7	6.2	13.4	17.31	.563	10.00	.719	11.03
18X 8X .563/1.000T	61.64	397.0	190.7	2560.5	7.9	6.4	13.4	18.13	.563	8.00	1.000	11.19
18X11X .563/ .875T	67.15	405.3	218.9	2807.5	8.1	6.9	12.8	19.75	.563	11.00	.875	11.12
18X10X .563/1.000T	68.44	408.5	224.6	2888.0	8.2	7.0	12.8	20.13	.563	10.00	1.000	11.19
18X12X .563/ .875T	70.14	409.5	233.5	2937.6	8.2	7.2	12.6	20.63	.563	12.00	.875	11.12
18X 9X .625/1.125T	72.69	411.9	230.2	2953.8	8.2	7.2	12.8	21.38	.625	9.00	1.125	12.50
21X 9X .688/ .875T	75.85	468.4	240.9	3620.3	8.9	7.7	15.0	22.31	.688	9.00	.875	15.66
21X10X .688/ .875T	78.85	475.1	258.0	3804.2	9.1	8.0	14.7	23.19	.688	10.00	.875	15.66
21X 8X .688/1.125T	79.70	479.4	261.0	3887.4	9.2	8.1	14.9	23.44	.688	8.00	1.125	15.83
21X11X .688/ .875T	81.80	481.1	274.9	3980.5	9.2	8.3	14.5	24.06	.688	11.00	.875	15.66
21X 9X .688/1.125T	83.50	486.9	282.4	4112.0	9.3	8.4	14.6	24.56	.688	9.00	1.125	15.83
21X10X .688/1.125T	87.35	493.4	303.8	4325.7	9.4	8.6	14.2	25.69	.688	10.00	1.125	15.83
21X13X .688/ .875T	87.75	491.3	308.4	4311.5	9.4	8.8	14.0	25.81	.688	13.00	.875	15.66
24X10X .750/ .875T	90.95	552.0	313.0	5144.3	10.2	9.3	16.4	26.75	.750	10.00	.875	19.32
24X 8X .750/1.125T	91.80	556.6	316.3	5244.5	10.2	9.4	16.6	27.00	.750	8.00	1.125	19.50
24X11X .750/ .875T	93.94	559.0	331.8	5362.5	10.3	9.6	16.2	27.63	.750	11.00	.875	19.32
24X 9X .750/1.125T	95.64	565.4	340.4	5525.1	10.4	9.8	16.2	28.13	.750	9.00	1.125	19.50
24X12X .750/ .875T	96.90	565.4	350.8	5575.2	10.4	9.9	15.9	28.50	.750	12.00	.875	19.32
24X10X .750/1.125T	99.45	573.2	364.6	5795.4	10.5	10.1	15.9	29.25	.750	10.00	1.125	19.50
24X13X .750/ .875T	99.89	571.3	370.0	5783.6	10.5	10.1	15.6	29.38	.750	13.00	.875	19.32
21X14X .688/1.125T	102.65	513.5	389.7	5096.8	9.8	9.9	13.1	30.19	.688	14.00	1.125	15.83
21X15X .688/1.125T	106.45	517.4	411.0	5269.1	9.9	10.2	12.6	31.31	.688	15.00	1.125	15.83
24X12X .750/1.125T	107.10	586.6	412.8	6301.3	10.8	10.7	15.3	31.50	.750	12.00	1.125	19.50
24X13X .750/1.125T	110.94	592.4	437.1	6548.8	10.8	11.0	15.0	32.63	.750	13.00	1.125	19.50
27X 9X .875/1.500T	126.24	683.3	488.7	8378.0	11.8	12.2	17.1	37.13	.875	9.00	1.500	25.70
27X10X .875/1.375T	127.09	683.5	496.1	8409.7	11.8	12.3	17.0	37.38	.875	10.00	1.375	25.60
27X13X .875/1.125T	130.05	686.0	520.1	8579.9	11.8	12.5	16.5	38.25	.875	13.00	1.125	25.38
27X10X .875/1.500T	131.34	692.8	523.7	8761.5	11.9	12.6	16.7	38.63	.875	10.00	1.500	25.70
27X11X .875/1.375T	131.75	692.1	528.4	8766.1	11.9	12.7	16.6	38.75	.875	11.00	1.375	25.60
27X14X .875/1.125T	133.89	692.5	546.7	8861.8	11.9	12.8	16.2	39.38	.875	14.00	1.125	25.38
27X15X .875/1.125T	137.70	698.5	572.9	9129.6	12.0	13.1	15.9	40.50	.875	15.00	1.125	25.38
27X13X .875/1.500T	146.64	716.0	628.7	9832.9	12.2	13.7	15.6	43.13	.875	13.00	1.500	25.70
30X10X1.000/1.375T	148.75	784.6	586.2	10822.0	12.7	13.8	18.5	43.75	1.000	10.00	1.375	32.26
30X10X1.000/1.500T	153.00	795.5	616.4	11243.0	12.9	14.1	18.2	45.00	1.000	10.00	1.500	32.38
30X11X1.000/1.375T	153.44	794.8	621.5	11249.2	12.9	14.2	18.1	45.13	1.000	11.00	1.375	32.26
30X10X1.000/1.750T	161.50	815.4	675.9	12057.3	13.1	14.6	17.6	47.50	1.000	10.00	1.750	32.63

0.8750 - 7/8 in.

1.000 IN. PLATE (AREA= 30.00 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	THICK	
3X 2X .125/ .100T	2.55	15.9	2.5	9.0	.5	.6	3.6	.75	3.19	.125	2.00	.100	.52
4X 2X .125/ .100T	2.99	23.4	3.0	14.0	.7	.6	4.6	.88	4.19	.125	2.00	.100	.65
3X 2X .100/ .250T	3.60	19.2	3.1	11.4	.6	.6	3.7	1.06	3.25	.100	2.00	.250	.80
3X 2X .100/ .313T	4.05	21.5	3.5	13.1	.6	.6	3.7	1.19	3.31	.100	2.00	.313	.81
3X 3X .100/ .250T	4.45	23.4	4.0	14.6	.7	.6	3.6	1.31	3.25	.100	3.00	.250	.80
4X 2X .100/ .313T	4.69	32.3	4.5	21.1	.8	.7	4.7	1.38	4.31	.100	2.00	.313	1.00
5X 2X .100/ .250T	4.90	40.8	5.0	27.7	.9	.7	5.6	1.44	5.25	.100	2.00	.250	1.10
5X 2X .100/ .313T	5.30	45.0	5.6	31.5	1.0	.7	5.6	1.56	5.31	.100	2.00	.313	1.19
6X 2X .100/ .313T	5.95	60.0	6.9	45.3	1.2	.8	6.6	1.75	6.31	.100	2.00	.313	1.37
6X 3X .100/ .250T	6.39	64.4	7.8	50.2	1.3	.8	6.5	1.88	6.25	.100	3.00	.250	1.36
4X 4X .100/ .313T	6.80	45.2	7.3	33.5	1.0	.7	4.6	2.00	4.31	.100	4.00	.313	1.00
6X 3X .100/ .313T	7.00	70.8	8.9	57.9	1.3	.8	6.5	2.06	6.31	.100	3.00	.313	1.37
5X 4X .100/ .313T	7.45	61.8	9.1	49.9	1.2	.8	5.5	2.19	5.31	.100	4.00	.313	1.19
6X 4X .100/ .313T	8.09	80.2	11.0	70.5	1.5	.9	6.4	2.38	6.31	.100	4.00	.313	1.37
5X 3X .250/ .430T	8.70	65.5	9.9	55.4	1.3	.8	5.6	2.56	5.44	.250	3.00	.430	1.61
7X 3X .250/ .313T	9.15	92.7	11.7	86.6	1.6	.9	7.4	2.69	7.31	.250	3.00	.313	2.08
6X 3X .250/ .430T	9.55	84.6	12.1	78.5	1.5	.9	6.5	2.81	6.44	.250	3.00	.430	1.86
7X 3X .250/ .375T	9.79	99.1	13.1	96.8	1.7	1.0	7.4	2.88	7.38	.250	3.00	.375	2.10
8X 3X .250/ .313T	10.00	112.9	13.9	115.2	1.9	1.0	8.3	2.94	8.31	.250	3.00	.313	2.33
7X 4X .250/ .313T	10.20	102.3	14.0	102.5	1.8	1.0	7.3	3.06	7.31	.250	4.00	.313	2.08
7X 3X .250/ .430T	10.40	104.9	14.4	106.8	1.8	1.0	7.4	3.06	7.44	.250	3.00	.430	2.11
8X 3X .250/ .375T	10.64	120.0	15.4	128.2	2.0	1.1	8.3	3.13	8.38	.250	3.00	.375	2.35
8X 4X .250/ .313T	11.05	123.7	16.5	135.6	2.0	1.1	8.2	3.25	8.31	.250	4.00	.313	2.33
8X 3X .250/ .430T	11.25	126.5	16.9	140.8	2.1	1.1	8.3	3.31	8.44	.250	3.00	.430	2.36
6X 5X .250/ .375T	11.49	96.6	15.7	99.9	1.7	1.0	6.3	3.38	6.38	.250	5.00	.375	1.85
8X 4X .250/ .375T	11.90	131.5	18.5	152.2	2.1	1.2	8.2	3.50	8.38	.250	4.00	.375	2.35
7X 5X .250/ .375T	12.34	118.7	18.7	135.1	2.0	1.1	7.2	3.63	7.38	.250	5.00	.375	2.10
6X 5X .250/ .430T	12.55	102.9	17.7	112.5	1.8	1.1	6.3	3.69	6.44	.250	5.00	.430	1.86
8X 4X .250/ .430T	12.75	138.9	20.6	169.3	2.2	1.2	8.2	3.75	8.44	.250	4.00	.430	2.36
13.19	141.6	21.7	20.9	176.7	2.3	1.2	8.1	3.88	8.38	.250	5.00	.375	2.35
7X 5X .250/ .430T	13.40	125.7	20.9	151.4	2.1	1.2	7.2	3.94	7.44	.250	5.00	.430	2.11
6X 5X .250/ .375T	14.04	109.9	20.5	128.7	1.9	1.2	6.3	4.13	6.44	.250	6.00	.375	1.86
8X 5X .250/ .430T	14.25	149.0	24.2	196.8	2.4	1.3	8.1	4.19	8.44	.250	5.00	.430	2.36
9X 4X .313/ .375T	14.65	156.5	23.1	208.7	2.5	1.3	9.0	4.31	9.38	.313	4.00	.375	3.25
7X 6X .250/ .430T	14.89	133.4	24.1	172.5	2.2	1.3	7.1	4.38	7.44	.250	6.00	.430	2.11
9X 4X .313/ .430T	15.50	163.8	25.3	229.1	2.6	1.4	9.0	4.56	9.44	.313	4.00	.430	3.27
10X 4X .313/ .375T	15.74	179.9	26.5	262.6	2.8	1.5	9.9	4.63	10.38	.313	4.00	.375	3.56
8X 6X .250/ .430T	15.74	157.5	27.9	223.8	2.5	1.4	8.0	4.63	8.44	.250	6.00	.430	2.36
9X 5X .313/ .375T	15.95	166.5	26.6	238.2	2.6	1.4	8.9	4.69	9.38	.313	5.00	.375	3.25
9X 4X .313/ .500T	16.35	170.4	27.6	249.3	2.7	1.5	9.0	4.81	9.58	.313	4.00	.500	3.29
10X 4X .313/ .430T	16.59	187.5	29.0	287.1	2.9	1.5	9.9	4.88	10.44	.313	4.00	.430	3.58
10X 5X .313/ .375T	17.00	190.5	30.4	298.0	2.9	1.6	9.8	5.00	10.38	.313	5.00	.375	3.56
9X 4X .313/ .563T	17.20	176.7	29.9	270.2	2.8	1.5	9.0	5.06	9.56	.313	4.00	.563	3.31
10X 4X .313/ .500T	17.44	194.6	31.5	311.9	3.0	1.6	9.9	5.13	10.50	.313	4.00	.500	3.68
10X 5X .313/ .430T	18.05	198.5	33.5	327.6	3.0	1.7	9.8	5.31	10.44	.313	5.00	.430	3.58

1.0000 - 1 in.



1.000 IN. PLATE (AREA= 30.00 SQ.IN.)

NOMINAL SIZE				SECTION MODULUS			DIMENSIONS				BEAM		FLANGE		SHEAR	
				WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	MIDTH	THICK	AREA
10X 4X	313/	563T	10.29	201.1	34.0	336.3	3.1	1.7	9.9	5.38	10.56	.313	4.80	.563	3.62	
9X 6X	313/	438T	10.50	102.9	33.5	295.9	2.9	1.6	8.8	5.44	9.44	.313	6.00	.438	3.27	
10X 5X	313/	508T	19.14	205.8	36.6	357.5	3.2	1.7	9.8	5.63	10.50	.313	5.00	.508	3.60	
7X 7X	313/	508T	19.35	146.6	31.6	220.8	2.5	1.5	7.0	5.69	7.50	.313	7.00	.508	2.66	
10X 6X	313/	438T	19.55	207.7	37.9	367.8	3.2	1.8	9.7	5.75	10.44	.313	6.00	.438	3.58	
9X 6X	313/	508T	19.75	189.9	36.9	324.5	3.0	1.7	8.8	5.81	9.50	.313	6.00	.508	3.29	
10X 5X	313/	563T	20.20	212.5	39.8	387.2	3.3	1.8	9.7	5.94	10.56	.313	5.00	.563	3.62	
7X 7X	313/	563T	20.84	152.1	34.7	242.0	2.6	1.6	7.0	6.13	7.56	.313	7.00	.563	2.68	
10X 6X	313/	508T	20.84	215.2	41.8	402.3	3.3	1.9	9.6	6.13	10.50	.313	6.00	.508	3.60	
9X 7X	313/	508T	21.45	197.3	41.5	368.2	3.1	1.8	8.7	6.31	9.50	.313	7.00	.508	3.29	
12X 4X	375/	469T	21.69	241.3	41.1	473.1	3.6	2.0	11.5	6.38	12.47	.375	4.00	.469	5.05	
8X 7X	313/	563T	21.90	177.9	40.1	312.8	2.9	1.8	7.8	6.44	8.56	.313	7.00	.563	2.99	
10X 6X	313/	563T	22.10	221.9	45.5	436.6	3.5	2.0	9.6	6.50	10.56	.313	6.00	.563	3.62	
10X 7X	313/	508T	22.54	223.1	46.9	445.5	3.5	2.0	9.5	6.63	10.50	.313	7.00	.508	3.68	
12X 4X	375/	531T	22.54	248.2	44.1	506.4	3.7	2.0	11.5	6.64	12.53	.375	4.00	.531	5.07	
12X 5X	375/	469T	23.26	252.9	46.8	532.2	3.8	2.1	11.4	6.83	12.47	.375	5.00	.469	5.05	
12X 4X	375/	594T	23.39	254.7	47.1	539.9	3.8	2.1	11.5	6.88	12.59	.375	4.00	.594	5.18	
7X 7X	375/	625T	23.80	157.1	38.2	268.2	2.7	1.7	6.9	7.08	7.63	.375	7.00	.625	3.24	
10X 7X	313/	563T	24.00	229.8	51.2	484.3	3.6	2.1	9.5	7.06	10.56	.313	7.00	.563	3.62	
12X 4X	375/	656T	24.24	260.6	49.9	572.2	3.9	2.2	11.5	7.13	12.66	.375	4.00	.656	5.12	
12X 5X	375/	531T	24.34	260.2	50.6	572.8	3.9	2.2	11.3	7.16	12.53	.375	5.00	.531	5.07	
9X 8X	313/	563T	24.85	210.0	50.8	431.8	3.4	2.2	8.5	7.31	9.56	.313	8.00	.563	3.31	
12X 6X	375/	469T	24.85	262.7	52.5	589.4	4.0	2.2	11.2	7.31	12.47	.375	6.00	.469	5.05	
12X 5X	375/	594T	25.40	266.7	54.2	611.9	4.0	2.3	11.3	7.47	12.59	.375	5.00	.594	5.10	
10X 8X	313/	563T	25.94	236.7	57.1	532.1	3.8	2.2	9.3	7.63	10.56	.313	8.00	.563	3.62	
12X 6X	375/	531T	26.15	270.2	57.0	636.7	4.1	2.4	11.2	7.69	12.53	.375	6.00	.531	5.87	
12X 5X	375/	656T	26.45	273.0	57.9	652.1	4.2	2.4	11.3	7.78	12.66	.375	5.00	.656	5.12	
12X 7X	375/	469T	26.45	271.1	58.2	645.3	4.1	2.4	11.1	7.78	12.47	.375	5.00	.469	5.05	
7X 7X	438/	688T	26.79	161.7	42.9	294.4	2.8	1.8	6.9	7.88	7.69	.438	7.00	.688	3.81	
12X 6X	375/	594T	27.40	276.9	61.4	682.5	4.2	2.5	11.1	8.06	12.59	.375	6.00	.594	5.10	
12X 7X	375/	531T	27.95	278.8	63.5	699.4	4.3	2.5	11.0	8.22	12.53	.375	7.00	.531	5.07	
7X 7X	438/	750T	28.25	165.9	46.0	315.0	2.9	1.9	6.9	8.31	7.75	.438	7.00	.750	3.83	
12X 6X	375/	656T	28.70	283.1	65.8	728.9	4.4	2.6	11.1	8.44	12.66	.375	6.00	.656	5.12	
12X 7X	375/	594T	29.44	285.4	68.6	751.3	4.4	2.6	11.0	8.66	12.59	.375	7.00	.594	5.10	
14X 5X	438/	531T	29.85	311.4	65.4	839.5	4.7	2.7	12.8	8.78	14.53	.438	5.00	.531	6.80	
14X 5X	438/	594T	38.91	318.2	69.6	898.1	4.8	2.8	12.8	9.09	14.59	.438	5.00	.594	6.83	
12X 7X	375/	656T	30.91	291.8	73.7	804.1	4.5	2.8	10.9	9.25	12.66	.375	7.00	.656	5.12	
12X 8X	375/	594T	31.45	292.7	75.7	817.6	4.6	2.8	10.8	9.25	12.59	.375	8.00	.594	5.10	
14X 6X	438/	531T	31.65	321.8	72.8	922.4	4.8	2.9	12.7	9.31	14.53	.438	6.00	.531	6.80	
14X 5X	438/	656T	31.99	324.7	73.9	942.3	4.9	2.9	12.8	9.41	14.66	.438	5.00	.656	6.86	
7X 7X	508/	875T	32.74	173.2	53.1	360.6	3.0	2.1	6.8	9.63	7.88	.508	7.00	.875	4.44	
14X 6X	438/	594T	32.95	328.8	77.9	981.6	5.0	3.0	12.6	9.63	14.59	.438	6.00	.594	6.83	
14X 5X	438/	719T	33.05	330.6	79.0	992.2	5.0	3.0	12.7	9.72	14.72	.438	5.00	.719	6.89	
12X 8X	375/	656T	33.15	299.0	81.7	876.4	4.7	2.9	10.7	9.75	12.66	.375	8.00	.656	5.12	
7X 6X	563/1.000T		33.80	173.9	52.9	364.8	3.0	2.1	6.9	9.94	8.00	.563	6.00	1.000	5.07	

1.000 IN. PLATE (AREA= 30.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK						
14X 6X .438/.656T	335.5	83.0	1041.6	5.1	3.1	12.6	10.06	14.66	.438	6.00	.656		6.86				
14X 7X .438/.594T	338.1	86.2	1070.6	5.2	3.2	12.4	10.28	14.59	.438	7.00	.594		6.83				
12X 9X .375/.656T	305.2	89.6	945.8	4.8	3.1	10.6	10.41	12.66	.375	9.00	.656		5.12				
14X 6X .438/.719T	341.6	88.0	1100.2	5.2	3.2	12.5	10.44	14.72	.438	6.00	.719		6.89				
14X 7X .438/.656T	344.7	92.1	1137.8	5.3	3.3	12.4	10.72	14.66	.438	7.00	.656		6.86				
14X 8X .438/.594T	346.0	94.5	1157.5	5.3	3.3	12.2	10.88	14.59	.438	8.00	.594		6.83				
7X 7X .563/1.000T	179.5	59.9	404.5	3.1	2.3	6.7	10.94	8.00	.563	7.00	1.000		5.07				
16X 5X .500/.594T	370.2	88.0	1250.6	5.5	3.4	14.2	10.97	16.59	.500	5.00	.594		8.88				
14X 7X .438/.719T	350.8	98.1	1204.7	5.4	3.4	12.3	11.16	14.72	.438	7.00	.719		6.89				
16X 5X .500/.656T	376.7	92.6	1312.2	5.6	3.5	14.2	11.28	16.66	.500	5.00	.656		8.83				
14X 8X .438/.656T	352.5	101.2	1231.1	5.5	3.5	12.2	11.38	14.66	.438	8.00	.656		8.86				
16X 6X .500/.594T	381.3	97.3	1363.7	5.7	3.6	14.0	11.56	16.59	.500	6.00	.594		8.80				
16X 5X .500/.719T	382.9	97.3	1374.8	5.7	3.6	14.1	11.59	16.72	.500	5.00	.719		8.86				
12X 9X .438/.719T	310.2	98.7	1027.4	5.0	3.3	10.4	11.72	12.72	.438	9.00	.719		6.01				
14X 8X .438/.719T	358.6	108.0	1304.4	5.6	3.6	12.1	11.88	14.72	.438	8.00	.719		6.89				
16X 6X .500/.656T	388.2	103.0	1437.2	5.9	3.7	14.0	11.94	16.66	.500	6.00	.656		8.83				
16X 7X .500/.594T	391.0	106.7	1474.3	5.9	3.8	13.8	12.16	16.59	.500	7.00	.594		8.80				
7X 7X .625/1.125T	185.2	66.7	447.6	3.3	2.4	6.7	12.25	8.13	.625	7.00	1.125		5.71				
16X 6X .500/.719T	394.6	108.6	1509.5	6.0	3.8	13.9	12.31	16.72	.500	6.00	.719		8.86				
16X 5X .500/.875T	397.0	109.1	1529.8	6.0	3.9	14.0	12.38	16.88	.500	5.00	.875		8.94				
12X 10X .438/.719T	315.7	107.4	1099.8	5.1	3.5	10.2	12.44	12.72	.438	10.00	.719		6.01				
16X 7X .500/.656T	398.0	113.2	1556.7	6.0	3.9	13.7	12.59	16.66	.500	7.00	.656		8.83				
14X 9X .438/.719T	365.5	117.9	1401.6	5.7	3.8	11.9	12.59	14.72	.438	9.00	.719		6.89				
16X 7X .500/.719T	404.5	119.9	1639.1	6.2	4.1	13.7	13.03	16.72	.500	7.00	.719		8.86				
16X 6X .500/.875T	408.9	122.7	1687.6	6.2	4.1	13.8	13.25	16.88	.500	6.00	.875		8.94				
16X 8X .500/.656T	406.5	123.5	1672.9	6.2	4.1	13.5	13.25	16.66	.500	8.00	.656		8.83				
14X 10X .438/.719T	371.4	127.8	1494.9	5.9	4.0	11.7	13.31	14.72	.438	10.00	.719		6.89				
7X 7X .688/1.250T	190.6	73.4	490.3	3.4	2.6	6.7	13.56	8.25	.688	7.00	1.250		6.36				
16X 8X .500/.719T	413.2	131.2	1764.9	6.4	4.3	13.4	13.75	16.72	.500	8.00	.719		8.86				
16X 9X .500/.656T	414.2	133.9	1786.7	6.4	4.3	13.3	13.91	16.66	.500	9.00	.656		8.83				
18X 6X .563/.656T	441.4	126.0	1926.6	6.6	4.4	15.3	14.06	18.66	.563	6.00	.656		11.07				
16X 7X .500/.875T	419.0	136.5	1840.9	6.5	4.4	13.5	14.13	16.88	.500	7.00	.875		8.94				
18X 6X .563/.719T	448.3	132.4	2015.8	6.7	4.5	15.2	14.44	18.72	.563	6.00	.719		11.10				
16X 9X .500/.719T	420.7	142.5	1885.9	6.5	4.5	13.2	14.47	16.72	.500	9.00	.719		8.86				
16X 8X .500/.875T	427.6	150.1	1986.9	6.6	4.6	13.2	15.00	16.88	.500	8.00	.875		8.94				
18X 7X .563/.719T	458.9	144.9	2171.9	6.9	4.7	15.0	15.16	18.72	.563	7.00	.719		11.10				
16X 10X .500/.719T	427.4	153.8	2003.7	6.7	4.7	13.0	15.19	16.72	.500	10.00	.719		8.86				
18X 8X .563/.656T	461.2	149.8	2214.2	7.0	4.8	14.9	15.38	18.66	.563	8.00	.656		11.07				
14X 10X .500/.875T	384.0	152.0	1729.4	6.1	4.5	11.4	15.75	14.88	.500	10.00	.875		7.94				
16X 9X .500/.875T	435.0	163.9	2128.3	6.8	4.9	13.0	15.88	16.88	.500	9.00	.875		8.94				
18X 8X .563/.719T	468.1	157.4	2322.7	7.1	5.0	14.8	15.88	18.72	.563	8.00	.719		11.10				
18X 9X .563/.656T	469.4	160.4	2350.1	7.1	5.0	14.7	16.03	18.66	.563	9.00	.656		11.07				
18X 6X .563/1.000T	474.2	160.4	2397.4	7.2	5.1	14.9	16.13	19.00	.563	6.00	1.000		11.26				
18X 7X .563/.875T	474.4	163.2	2414.0	7.2	5.1	14.8	16.25	18.88	.563	7.00	.875		11.19				
18X 9X .563/.719T	476.4	169.8	2469.2	7.3	5.2	14.5	16.59	18.72	.563	9.00	.719		11.10				

1.0000 - 1 in.



1.000 IN. PLATE (AREA= 30.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	WEB THICK	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA							WIDTH	FLANGE THICK	
16X10X .500/.875T	56.95	441.5	177.4	2262.7	7.0	5.1	12.8	16.75	16.00	.500	10.00	.875	8.94
18X10X .563/.719T	58.85	483.9	182.4	2812.4	7.4	5.4	14.3	17.31	18.72	.563	10.00	.719	11.10
18X 8X .563/1.000T	61.64	494.6	195.1	2797.8	7.6	5.7	14.3	18.13	19.00	.563	8.00	1.000	11.26
18X11X .563/.875T	67.15	505.7	223.7	3083.7	7.9	6.1	13.8	19.75	18.80	.563	11.00	.875	11.19
18X10X .563/1.000T	68.44	509.9	229.6	3166.7	7.9	6.2	13.8	20.13	19.00	.563	10.00	1.000	11.26
18X12X .563/.875T	70.14	511.4	238.7	3235.3	8.0	6.3	13.6	20.63	18.00	.563	12.00	.875	11.19
18X 9X .625/1.125T	72.69	513.1	235.8	3251.9	8.0	6.3	13.8	21.38	19.13	.625	9.00	1.125	12.58
21X 9X .688/.875T	75.85	580.4	247.4	3968.6	8.7	6.8	16.0	22.31	21.88	.688	9.00	.875	15.74
21X10X .688/.875T	78.85	589.0	264.8	4179.5	8.9	7.1	15.8	23.19	21.88	.688	10.00	.875	15.74
21X 8X .688/1.125T	79.70	594.3	268.0	4272.7	8.9	7.2	15.9	23.44	22.13	.688	8.00	1.125	15.91
21X11X .688/.875T	81.80	596.7	282.1	4382.8	9.0	7.3	15.5	24.06	21.88	.688	11.00	.875	15.74
21X 9X .688/1.125T	83.50	603.9	290.0	4532.1	9.1	7.5	15.6	24.56	22.13	.688	9.00	1.125	15.91
21X12X .688/.875T	84.80	603.7	299.4	4579.4	9.1	7.6	15.3	24.94	21.88	.688	12.00	.875	15.74
21X10X .688/1.125T	87.35	612.3	312.0	4788.4	9.3	7.8	15.3	25.69	22.13	.688	10.00	1.125	15.91
21X13X .688/.875T	87.75	609.9	316.5	4787.1	9.2	7.8	15.1	25.81	21.88	.688	13.00	.875	15.74
24X10X .750/.875T	90.95	681.1	322.2	5660.5	10.0	8.3	17.6	26.75	24.88	.750	10.00	.875	19.41
24X 8X .750/1.125T	91.80	686.8	325.7	5772.7	10.1	8.4	17.7	27.00	25.13	.750	8.00	1.125	19.60
24X11X .750/.875T	93.94	689.9	341.5	5911.3	10.1	8.6	17.3	27.63	24.88	.750	11.00	.875	19.41
24X 9X .750/1.125T	95.64	697.7	350.4	6095.6	10.2	8.7	17.4	28.13	25.13	.750	9.00	1.125	19.60
24X12X .750/.875T	96.90	698.0	360.9	6156.7	10.3	8.8	17.1	28.50	24.88	.750	12.00	.875	19.41
24X13X .750/1.125T	99.45	707.7	375.3	6408.2	10.4	9.1	17.1	29.25	25.13	.750	10.00	1.125	19.60
24X10X .750/.875T	99.89	705.5	380.6	6398.3	10.4	9.1	16.8	29.38	24.88	.750	13.00	.875	19.41
21X14X .688/1.125T	102.65	638.3	400.1	5688.4	9.7	8.9	14.2	30.19	22.13	.688	14.00	1.125	15.91
21X15X .688/1.125T	106.45	643.4	421.9	5893.9	9.8	9.2	14.0	31.31	22.13	.688	15.00	1.125	15.91
24X12X .750/1.125T	107.10	724.6	424.8	6997.8	10.7	9.7	16.5	31.50	25.13	.750	12.00	1.125	19.60
24X13X .750/1.125T	110.94	731.9	449.8	7279.0	10.8	9.9	16.2	32.63	25.13	.750	13.00	1.125	19.60
27X 9X .875/1.500T	126.24	836.2	505.1	9288.9	11.8	11.1	18.4	37.13	28.50	.875	9.00	1.500	25.81
27X10X .875/1.375T	127.09	836.5	512.5	9337.3	11.8	11.2	16.2	37.38	28.38	.875	10.00	1.375	25.71
27X13X .875/1.125T	130.05	839.7	536.9	9540.4	11.8	11.4	17.8	38.25	28.13	.875	13.00	1.125	25.49
27X10X .875/1.500T	131.34	847.9	541.1	9744.4	11.9	11.5	18.0	38.63	28.50	.875	10.00	1.500	25.81
27X11X .875/1.375T	131.75	847.0	545.8	9752.3	11.9	11.5	17.9	38.75	28.38	.875	11.00	1.375	25.71
27X14X .875/1.125T	133.89	847.8	564.4	9869.7	11.9	11.6	17.5	39.38	28.13	.875	14.00	1.125	25.49
27X15X .875/1.125T	137.70	855.1	591.3	10183.5	12.0	11.9	17.2	40.50	28.13	.875	15.00	1.125	25.49
30X13X .875/1.500T	146.64	876.4	649.3	11082.7	12.3	12.6	16.9	43.13	28.50	.875	13.00	1.500	25.81
30X10X1.000/1.375T	148.75	951.2	607.4	12083.0	12.8	12.6	19.8	43.75	31.38	1.000	10.00	1.375	32.38
30X10X1.000/1.500T	153.80	964.2	638.7	12486.0	12.9	13.0	19.6	45.00	31.50	1.000	10.00	1.500	32.50
30X11X1.000/1.375T	153.44	963.4	643.8	12496.0	12.9	13.0	19.4	45.13	31.38	1.000	11.00	1.375	32.38
30X10X1.000/1.750T	161.50	988.1	700.4	13423.7	13.2	13.6	19.2	47.50	31.75	1.000	10.00	1.750	32.75

1.0000 - 1 in.

1.125 IN. PLATE (AREA= 37.97 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			R	***** BEAM DIMENSIONS *****			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .125/ .188T	2.55	17.5	2.9	10.8	.5	.6	3.7	.75	3.19	.54
4X 2X .125/ .188T	2.99	24.8	3.4	15.9	.6	.6	4.7	.88	4.19	.66
3X 2X .188/ .250T	3.60	20.8	3.6	13.3	.6	.6	3.7	1.06	3.25	.82
3X 2X .188/ .313T	4.05	23.2	4.0	15.1	.6	.7	3.0	1.19	3.31	.83
3X 3X .188/ .250T	4.45	25.1	4.5	16.6	.7	.7	3.7	1.31	3.25	.82
4X 2X .188/ .313T	4.69	34.0	4.9	23.3	.8	.7	4.7	1.38	4.31	1.02
5X 2X .188/ .250T	4.90	42.5	5.3	30.1	.9	.7	5.7	1.44	5.25	1.20
5X 2X .188/ .313T	5.30	47.0	6.0	34.1	.9	.7	5.7	1.56	5.31	1.21
6X 2X .188/ .250T	5.95	62.7	7.2	48.2	1.1	.8	6.7	1.75	6.31	1.40
6X 3X .188/ .250T	6.39	67.5	8.1	53.3	1.2	.8	6.6	1.88	6.25	1.39
4X 4X .188/ .313T	6.80	74.7	9.3	61.2	1.0	.8	4.7	2.00	4.31	1.02
6X 3X .188/ .313T	7.00	74.7	9.3	61.2	1.2	.8	5.6	2.06	6.31	1.40
5X 4X .188/ .313T	7.45	65.5	9.5	53.2	1.2	.8	5.6	2.19	5.31	1.21
6X 4X .188/ .313T	8.09	85.5	11.3	74.4	1.4	.9	6.6	2.38	6.31	1.40
5X 3X .250/ .438T	8.70	69.9	10.3	59.0	1.2	.8	5.7	2.56	5.44	1.64
7X 3X .250/ .313T	9.15	99.4	12.1	91.0	1.5	.9	7.5	2.69	7.31	2.11
6X 3X .250/ .438T	9.55	90.9	12.5	82.9	1.4	.9	6.7	2.81	6.44	1.89
9.79	106.9	13.4	101.6	1.6	1.0	7.6	2.88	7.38	2.13	2.36
8X 3X .250/ .313T	10.00	122.2	14.3	120.4	1.7	1.0	8.4	2.94	8.31	2.36
7X 4X .250/ .313T	10.20	110.7	14.4	107.6	1.6	1.0	7.5	3.00	7.31	2.11
8X 3X .250/ .438T	10.64	130.7	15.8	112.0	1.7	1.0	7.6	3.06	7.44	2.30
8X 4X .250/ .313T	11.05	135.2	16.9	141.7	1.9	1.0	8.4	3.25	8.31	2.36
8X 3X .250/ .438T	11.25	130.4	17.3	147.1	1.9	1.1	8.5	3.31	8.44	2.39
6X 5X .250/ .375T	11.49	105.4	16.2	105.3	1.6	1.0	6.5	3.38	6.38	1.88
11.90	144.7	18.9	159.0	2.0	1.1	8.4	3.50	8.38	2.50	2.38
7X 5X .250/ .375T	12.34	130.7	19.1	141.7	1.8	1.1	7.4	3.63	7.38	2.13
12.55	113.2	18.2	118.5	1.7	1.0	6.5	3.69	6.44	2.50	1.89
8X 4X .250/ .438T	12.75	153.9	21.0	176.9	2.1	1.1	8.4	3.75	8.44	2.39
13.19	157.4	22.2	184.7	2.1	1.2	8.3	3.88	8.38	2.50	2.38
7X 5X .250/ .438T	13.40	139.5	21.4	158.8	1.9	1.1	7.4	3.94	7.44	2.14
6X 6X .250/ .438T	14.04	121.9	21.0	135.7	1.8	1.1	6.5	4.13	6.44	1.89
8X 5X .250/ .438T	14.25	166.8	24.7	205.9	2.2	1.2	8.3	4.19	8.44	2.39
9X 4X .313/ .375T	14.65	175.0	23.5	217.9	2.3	1.2	9.3	4.31	9.38	3.29
7X 6X .250/ .438T	14.89	149.3	24.6	181.2	2.1	1.2	7.4	4.38	7.44	2.14
9X 4X .313/ .438T	15.58	184.2	25.8	239.3	2.4	1.3	9.3	4.56	9.44	3.31
10X 4X .313/ .375T	15.74	202.8	27.0	273.8	2.5	1.3	10.2	4.63	10.38	3.60
8X 6X .313/ .438T	15.74	177.8	28.4	234.4	2.3	1.3	8.2	4.63	8.44	2.39
9X 5X .313/ .375T	15.95	187.7	27.1	248.9	2.4	1.3	9.2	4.69	9.38	3.29
9X 4X .313/ .500T	16.35	192.5	28.1	260.5	2.5	1.4	9.3	4.81	9.50	3.33
10X 4X .313/ .438T	16.59	212.6	29.5	299.5	2.6	1.4	10.2	4.88	10.44	3.62
10X 5X .313/ .375T	17.00	216.4	30.9	311.0	2.7	1.4	10.1	5.00	10.38	3.60
9X 4X .313/ .563T	17.20	200.7	30.5	282.6	2.6	1.4	9.3	5.06	9.56	3.34
10X 4X .313/ .500T	17.44	221.7	32.1	325.6	2.7	1.5	10.2	5.13	10.50	3.64
18.05	226.8	34.0	342.2	2.8	1.5	10.1	10.44	5.31	10.44	3.62

1.1250 - 1 1/8 in.



1.125 IN. PLATE (AREA= 37.97 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
10X 4X	313/	.563T	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	AREA		
10X 4X	.313/	.563T	18.29	230.0	34.6	351.3	2.8	1.5	10.2	5.38	10.56	.313	4.00	.563	3.66		
9X 6X	.313/	.438T	18.50	209.0	34.1	309.8	2.7	1.5	9.1	5.44	9.44	.313	6.00	.438	3.31		
10X 5X	.313/	.500T	19.14	236.3	37.2	373.8	2.9	1.6	10.0	5.63	10.50	.313	5.00	.500	3.64		
10X 7X	.313/	.500T	19.35	167.2	32.2	232.9	2.3	1.4	7.2	5.69	7.50	.313	7.00	.500	2.70		
10X 6X	.313/	.438T	19.55	238.9	38.6	383.9	3.0	1.6	10.0	5.75	10.44	.313	6.00	.438	3.62		
9X 6X	.313/	.500T	19.75	218.1	37.5	340.2	2.8	1.6	9.1	5.81	9.50	.313	6.00	.500	3.33		
10X 5X	.313/	.563T	20.20	245.2	40.4	405.3	3.0	1.7	10.0	5.94	10.56	.313	5.00	.563	3.66		
7X 7X	.313/	.563T	20.84	174.5	35.4	255.6	2.4	1.5	7.2	6.13	7.56	.313	7.00	.563	2.72		
10X 6X	.313/	.500T	20.84	248.9	42.4	421.4	3.1	1.7	9.9	6.13	10.50	.313	6.00	.500	3.64		
9X 7X	.313/	.500T	21.45	228.1	42.2	378.4	2.9	1.7	9.0	6.31	9.50	.313	7.00	.500	3.33		
12X 4X	.375/	.469T	21.69	279.2	41.8	494.2	3.3	1.8	11.8	6.38	12.47	.375	4.00	.469	5.10		
8X 7X	.313/	.563T	21.90	205.4	40.8	329.6	2.7	1.6	8.1	6.44	8.56	.313	7.00	.563	3.03		
10X 6X	.313/	.563T	22.10	257.9	46.2	458.0	3.2	1.8	9.9	6.50	10.56	.313	6.00	.563	3.66		
10X 7X	.313/	.500T	22.54	259.5	47.6	467.5	3.2	1.8	9.8	6.63	10.50	.313	7.00	.500	3.64		
12X 4X	.375/	.531T	22.54	288.3	44.8	529.5	3.4	1.8	11.8	6.63	12.53	.375	4.00	.531	5.12		
12X 5X	.375/	.469T	23.26	294.5	47.6	556.8	3.5	1.9	11.7	6.84	12.47	.375	5.00	.469	5.10		
12X 4X	.375/	.594T	23.39	296.7	47.8	564.9	3.5	1.9	11.8	6.88	12.59	.375	4.00	.594	5.14		
7X 7X	.375/	.625T	23.80	181.4	39.5	284.0	2.5	1.6	7.2	7.00	7.63	.375	7.00	.625	3.28		
10X 7X	.313/	.563T	24.00	268.6	52.0	509.1	3.4	1.9	9.8	7.06	10.56	.313	7.00	.563	3.66		
12X 4X	.375/	.656T	24.24	304.4	50.7	599.2	3.6	2.0	11.8	7.13	12.66	.375	4.00	.656	5.17		
12X 5X	.375/	.531T	24.34	304.0	51.4	600.0	3.6	2.0	11.7	7.16	12.53	.375	5.00	.531	5.12		
9X 8X	.313/	.563T	24.85	245.5	51.6	455.3	3.2	1.9	8.8	7.31	9.56	.313	8.00	.563	3.34		
12X 6X	.375/	.469T	24.85	307.4	53.3	617.7	3.7	2.0	11.6	7.31	12.47	.375	6.00	.469	5.10		
12X 5X	.375/	.594T	25.40	312.6	55.0	641.6	3.8	2.1	11.7	7.47	12.59	.375	5.00	.594	5.14		
10X 8X	.313/	.563T	25.94	278.1	58.0	560.6	3.5	2.0	9.7	7.63	10.56	.313	8.00	.563	3.66		
12X 6X	.375/	.531T	26.15	317.3	57.9	668.2	3.8	2.1	11.5	7.69	12.53	.375	6.00	.531	5.12		
12X 5X	.375/	.656T	26.45	321.0	58.7	684.5	3.9	2.1	11.7	7.78	12.66	.375	5.00	.656	5.17		
12X 7X	.375/	.469T	26.45	318.7	59.1	677.4	3.8	2.1	11.5	7.78	12.47	.375	7.00	.469	5.10		
7X 7X	.438/	.688T	26.79	187.8	43.7	312.6	2.6	1.7	7.2	7.88	7.69	.438	7.00	.688	3.86		
12X 6X	.375/	.594T	27.40	326.2	62.3	717.2	3.9	2.2	11.5	8.06	12.59	.375	6.00	.594	5.14		
12X 7X	.375/	.531T	27.95	328.9	64.4	735.4	4.0	2.2	11.4	8.22	12.53	.375	7.00	.531	5.12		
7X 7X	.438/	.750T	28.25	193.4	46.9	335.0	2.7	1.7	7.1	8.31	7.75	.438	7.00	.750	3.89		
12X 6X	.375/	.656T	28.70	334.6	66.7	767.0	4.1	2.3	11.5	8.44	12.66	.375	6.00	.656	5.17		
12X 7X	.375/	.594T	29.44	337.9	68.6	791.3	4.3	2.4	13.3	8.66	12.59	.375	7.00	.594	5.14		
14X 5X	.438/	.531T	29.85	367.9	66.5	881.5	4.3	2.4	13.3	8.78	14.53	.438	5.00	.531	6.86		
14X 5X	.438/	.594T	30.91	376.8	70.7	935.6	4.5	2.5	13.2	9.09	14.59	.438	5.00	.594	6.88		
12X 7X	.375/	.656T	30.91	346.4	74.8	848.2	4.2	2.4	11.3	9.09	12.66	.375	7.00	.656	5.17		
12X 8X	.375/	.594T	31.45	347.9	76.8	863.1	4.3	2.5	11.2	9.25	12.59	.375	8.00	.594	5.14		
14X 6X	.438/	.531T	31.65	381.7	74.0	970.3	4.5	2.5	13.1	9.31	14.53	.438	6.00	.531	6.86		
14X 5X	.438/	.656T	31.99	385.4	75.1	991.6	4.6	2.6	13.2	9.41	14.66	.438	5.00	.656	6.91		
7X 7X	.500/	.875T	32.74	203.5	54.1	385.0	2.8	1.9	7.1	9.63	7.88	.500	7.00	.875	4.50		
14X 6X	.438/	.594T	32.95	390.9	73.1	1034.0	4.7	2.6	13.1	9.69	14.59	.438	6.00	.594	6.88		
14X 5X	.438/	.719T	33.05	393.2	79.3	1045.1	4.7	2.7	13.2	9.72	14.72	.438	5.00	.719	6.94		
12X 8X	.375/	.656T	33.15	356.4	82.9	926.7	4.4	2.6	11.2	9.75	12.66	.375	8.00	.656	5.17		
7X 6X	.563/	1.000T	33.80	204.3	54.0	389.6	2.9	1.9	7.2	9.94	8.00	.563	6.00	1.000	5.14		

1.1250 - 1 1/8 in.

1.125 IN. PLATE (AREA= 37.97 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		R	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA					WEB THICK	FLANGE WIDTH THICK	
14X 6X .438/ .656T	34.20	399.8	84.3	1090.5	4.8	2.7	13.0	10.06	14.66	6.91
14X 7X .438/ .594T	34.95	403.2	87.5	1130.0	4.8	2.8	12.9	10.28	14.59	6.88
12X 9X .375/ .656T	35.39	365.0	90.8	1082.6	4.6	2.7	11.8	10.41	12.66	5.17
14X 6X .438/ .719T	35.50	407.8	89.4	1161.8	4.9	2.8	13.0	10.44	14.72	6.94
14X 7X .438/ .656T	36.45	412.1	93.5	1202.8	5.0	2.9	12.9	10.72	14.66	6.91
14X 8X .438/ .594T	36.99	414.0	96.0	1224.3	5.0	3.0	12.8	10.88	14.59	6.88
7X 7X .563/1.000T	37.20	212.1	61.2	433.5	3.0	2.0	7.1	10.94	8.00	5.14
16X 5X .500/ .594T	37.30	441.6	89.5	1318.8	5.2	3.0	14.7	10.97	16.59	8.86
14X 7X .438/ .719T	37.94	420.3	99.6	1275.3	5.1	3.0	12.8	11.16	14.72	6.94
16X 5X .500/ .656T	38.35	450.0	94.2	1385.1	5.3	3.1	14.7	11.28	16.66	8.89
14X 8X .438/ .656T	38.69	422.7	102.7	1384.4	5.1	3.1	12.7	11.38	14.66	6.91
16X 6X .500/ .594T	39.30	456.2	99.0	1440.8	5.4	3.2	14.6	11.56	16.59	8.86
16X 5X .500/ .719T	39.41	458.1	99.0	1452.5	5.4	3.2	14.7	11.59	16.72	8.92
12X 9X .438/ .719T	39.85	372.0	100.2	1093.1	4.7	2.9	10.9	11.72	12.72	6.86
14X 8X .438/ .719T	40.39	430.8	109.6	1384.3	5.3	3.2	12.6	11.88	14.72	6.94
16X 6X .500/ .656T	40.60	465.1	104.7	1520.2	5.5	3.3	14.5	11.94	16.66	8.89
16X 7X .500/ .594T	41.34	468.9	108.5	1560.6	5.6	3.3	14.4	12.16	16.59	8.86
7X 7X .625/1.125T	41.65	219.8	68.1	481.5	3.1	2.2	7.1	12.25	8.13	5.78
16X 6X .500/ .719T	41.85	473.5	110.5	1598.5	5.6	3.4	14.5	12.31	16.72	8.92
16X 5X .500/ .875T	42.09	476.4	110.9	1620.1	5.7	3.4	14.6	12.38	16.88	9.00
12X 10X .438/ .719T	42.30	379.6	109.1	1173.0	4.8	3.1	10.8	12.44	12.72	6.06
16X 7X .500/ .656T	42.81	478.0	115.1	1658.0	5.7	3.5	14.3	12.59	16.66	8.89
14X 9X .438/ .719T	42.81	440.2	119.7	1491.1	5.4	3.4	12.5	12.59	14.72	6.94
16X 7X .500/ .719T	44.30	486.6	121.9	1739.7	5.8	3.6	14.3	13.03	16.72	8.92
16X 6X .500/ .875T	45.05	492.2	124.8	1792.2	5.9	3.6	14.4	13.25	16.88	9.00
16X 8X .500/ .656T	45.05	489.3	125.5	1776.9	5.9	3.6	14.2	13.25	16.66	8.89
14X 10X .438/ .719T	45.25	448.3	129.7	1594.2	5.6	3.6	12.3	13.31	14.72	6.94
7X 7X .688/1.250T	46.10	227.0	75.1	529.1	3.2	2.3	7.0	13.56	8.25	6.45
16X 8X .500/ .719T	46.75	498.1	133.4	1877.5	6.0	3.8	14.1	13.75	16.72	8.92
16X 9X .500/ .656T	47.29	499.5	136.1	1901.7	6.1	3.8	14.0	13.91	16.66	8.89
18X 6X .563/ .656T	47.80	530.8	128.3	2044.5	6.3	3.9	15.9	14.06	18.66	11.14
16X 7X .500/ .875T	48.04	505.6	138.8	1968.4	6.1	3.9	14.1	14.13	16.88	9.00
18X 6X .563/ .719T	49.10	539.6	134.9	2141.3	6.4	4.0	15.9	14.44	18.72	11.17
16X 9X .500/ .719T	49.20	508.1	144.8	2010.6	6.2	4.0	13.9	14.47	16.72	8.92
16X 8X .500/ .875T	51.00	517.1	152.6	2121.6	6.3	4.1	13.9	15.00	16.88	9.00
18X 7X .563/ .719T	51.54	553.3	147.6	2311.9	6.6	4.2	15.7	15.16	18.72	11.17
16X 10X .500/ .719T	51.65	517.0	156.2	2140.9	6.3	4.1	13.7	15.19	15.72	8.92
18X 8X .563/ .656T	52.29	556.4	151.7	2350.5	6.6	4.2	15.5	15.38	18.66	11.14
14X 10X .500/ .875T	53.55	465.1	154.5	1855.9	5.9	4.0	12.0	15.75	14.88	8.00
16X 9X .500/ .875T	53.99	527.1	166.5	2278.6	6.5	4.3	13.7	15.88	16.88	9.00
18X 8X .563/ .719T	54.50	565.3	160.2	2477.4	6.8	4.4	15.4	15.88	18.72	11.17
18X 9X .563/ .656T	54.50	567.1	163.2	2507.8	6.8	4.4	15.4	16.03	18.66	11.14
18X 6X .563/1.000T	54.84	572.8	163.4	2550.4	6.9	4.5	15.7	16.13	19.00	11.33
18X 7X .563/ .875T	55.25	573.3	166.2	2577.3	6.9	4.5	15.5	16.25	18.88	11.26
18X 9X .563/ .719T	56.41	576.2	172.9	2638.9	7.0	4.6	15.3	16.59	18.72	11.17

1.1250 - 1 1/8 in.



1.125 IN. PLATE (AREA= 37.97 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			R	***** BEAM DIMENSIONS *****			*****		
WT/FI	ZPL	ZFL	INERTIA	VP	YF	AREA	DEPTH	THICK	WEB	FLANGE	THICK	SHEAR AREA
16X10X .500/ .875T	56.95	535.7	180.3	4.5	13.5	16.75	16.00	.500	.875	10.00	.875	9.00
18X10X .563/ .719T	58.05	505.9	185.6	4.8	15.1	17.31	18.72	.563	.719	10.00	.719	11.17
18X 8X .563/1.000T	61.64	599.6	198.6	5.0	15.1	18.13	19.00	.563	1.000	8.00	1.000	11.33
18X11X .563/ .875T	67.15	614.5	227.7	5.4	14.6	19.75	18.00	.563	.875	11.00	.875	11.26
18X10X .563/1.000T	68.44	619.8	233.7	5.5	14.6	20.13	19.00	.563	1.000	10.00	1.000	11.33
18X12X .563/ .875T	70.14	621.9	242.9	5.6	14.4	20.63	18.00	.563	.875	12.00	.875	11.26
18X 9X .625/1.125T	72.69	622.9	240.3	5.6	14.6	21.38	19.13	.625	1.125	9.00	1.125	12.66
21X 9X .688/ .875T	75.85	702.3	252.6	6.1	16.9	22.31	21.00	.688	.875	9.00	.875	15.83
21X10X .688/ .875T	78.85	713.2	270.3	6.3	16.7	23.19	21.00	.688	.875	10.00	.875	15.83
21X 8X .688/1.125T	79.70	719.8	273.8	6.4	16.8	23.44	22.13	.688	1.125	8.00	1.125	16.00
21X11X .688/ .875T	81.80	723.1	288.0	6.6	16.5	24.06	21.00	.688	.875	11.00	.875	15.83
21X 9X .688/1.125T	83.50	732.1	296.2	6.7	16.6	24.56	22.13	.688	1.125	9.00	1.125	16.00
21X12X .688/ .875T	84.80	732.0	305.6	6.8	16.2	24.94	21.00	.688	.875	12.00	.875	15.83
21X10X .688/1.125T	87.35	742.8	318.6	7.0	16.3	25.69	22.13	.688	1.125	10.00	1.125	16.00
21X13X .688/ .875T	87.75	748.0	323.0	7.0	16.0	25.81	21.00	.688	.875	13.00	.875	15.83
21X10X .750/ .875T	90.95	823.0	329.6	7.4	18.6	26.75	24.00	.750	.875	10.00	.875	19.50
21X 8X .750/1.125T	91.80	829.8	333.4	7.5	18.7	27.00	25.13	.750	1.125	8.00	1.125	19.69
21X11X .750/ .875T	93.94	833.9	349.3	7.7	18.3	27.63	24.00	.750	.875	11.00	.875	19.50
21X 9X .750/1.125T	95.64	843.5	358.6	7.8	18.4	28.13	25.13	.750	1.125	9.00	1.125	19.69
21X12X .750/ .875T	96.90	844.0	369.1	7.9	18.1	28.50	24.00	.750	.875	12.00	.875	19.50
21X10X .750/1.125T	99.45	856.0	384.0	8.1	18.1	29.25	25.13	.750	1.125	10.00	1.125	19.69
21X13X .750/ .875T	99.89	853.4	389.2	8.1	17.9	29.38	24.00	.750	.875	13.00	.875	19.50
21X14X .688/1.125T	102.65	776.1	408.4	8.0	15.2	30.19	22.13	.688	1.125	14.00	1.125	16.00
21X15X .688/1.125T	106.45	762.6	430.7	8.3	15.0	31.31	22.13	.688	1.125	15.00	1.125	16.00
21X12X .750/1.125T	107.10	877.1	434.6	8.7	17.6	31.50	25.13	.750	1.125	12.00	1.125	19.69
21X13X .750/1.125T	110.94	886.3	460.0	9.0	17.3	32.63	25.13	.750	1.125	13.00	1.125	19.69
21X 9X .875/1.500T	126.24	1006.0	518.6	10.1	19.5	37.13	28.50	.875	1.500	9.00	1.500	25.92
21X10X .875/1.375T	127.09	1006.5	526.1	10.1	19.4	37.38	28.38	.875	1.375	10.00	1.375	25.82
21X13X .875/1.125T	130.85	1010.7	550.8	10.3	18.9	38.25	28.13	.875	1.125	13.00	1.125	25.60
21X10X .875/1.500T	131.34	1020.3	555.5	10.4	19.2	38.63	28.50	.875	1.500	10.00	1.500	25.92
21X11X .875/1.375T	131.75	1019.4	560.2	10.5	19.0	38.75	28.38	.875	1.375	11.00	1.375	25.82
21X14X .875/1.125T	133.89	1020.6	578.9	10.6	18.7	39.38	28.13	.875	1.125	14.00	1.125	25.60
21X15X .875/1.125T	137.70	1029.6	606.5	10.8	18.4	40.50	28.13	.875	1.125	15.00	1.125	25.60
21X13X .875/1.500T	146.64	1055.3	666.3	11.5	18.2	43.13	28.50	.875	1.500	13.00	1.500	25.92
30X10X1.000/1.375T	148.75	1136.9	625.3	12.7	21.0	43.75	31.38	1.000	1.375	10.00	1.375	32.51
30X10X1.000/1.500T	153.00	1152.5	657.4	11.9	20.8	45.00	31.50	1.000	1.500	10.00	1.500	32.63
30X11X1.000/1.375T	153.44	1151.7	662.6	11.9	20.6	45.13	31.38	1.000	1.375	11.00	1.375	32.51
30X10X1.000/1.750T	161.50	1181.0	721.1	12.5	20.4	47.50	31.75	1.000	1.750	10.00	1.750	32.88

1.1250 - 1 1/8 in.

1.250 IN. PLATE (AREA= 46.88 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM			FLANGE			SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	THICK	WEB	WIDTH	THICK	THICK	AREA	
3X 2X .125/ .188T	2.55	19.7	3.5	13.2	.5	.7	3.8	.75	3.19	.125	2.00	.188	.188	.56	
4X 2X .125/ .188T	2.99	26.7	3.9	18.4	.6	.7	4.8	.88	4.19	.125	2.00	.188	.188	.68	
3X 2X .188/ .250T	3.60	23.0	4.2	15.8	.6	.7	3.8	1.06	3.25	.188	2.00	.250	.250	.85	
3X 2X .188/ .313T	4.05	25.3	4.6	17.7	.6	.7	3.9	1.19	3.31	.188	2.00	.313	.313	.86	
3X 3X .188/ .250T	4.45	27.3	5.1	19.3	.6	.7	3.8	1.31	3.25	.188	3.00	.250	.250	.85	
4X 2X .188/ .313T	4.69	35.9	5.4	26.1	.7	.7	4.8	1.38	4.31	.188	2.00	.313	.313	1.05	
5X 2X .188/ .250T	4.90	44.3	5.7	33.0	.8	.7	5.8	1.44	5.25	.188	2.00	.250	.250	1.22	
5X 2X .188/ .313T	5.30	48.9	6.4	37.1	.9	.8	5.8	1.56	5.31	.188	2.00	.313	.313	1.23	
6X 2X .188/ .313T	5.95	64.9	7.6	51.6	1.0	.8	6.8	1.75	6.31	.188	2.00	.313	.313	1.42	
6X 3X .188/ .250T	6.39	69.9	8.5	56.9	1.1	.8	6.7	1.88	6.25	.188	3.00	.250	.250	1.41	
4X 4X .188/ .313T	6.80	50.3	8.3	39.6	.9	.8	4.8	2.08	4.31	.188	4.00	.313	.313	1.85	
6X 3X .188/ .313T	7.88	77.6	9.7	65.0	1.2	.8	6.7	2.06	6.31	.188	3.00	.313	.313	1.42	
5X 4X .188/ .313T	7.45	68.4	9.9	56.9	1.1	.8	5.7	2.19	5.31	.188	4.00	.313	.313	1.23	
6X 4X .188/ .313T	8.09	89.4	11.8	78.7	1.3	.9	6.7	2.38	6.31	.188	4.00	.313	.313	1.42	
5X 3X .250/ .438T	8.70	73.3	10.8	63.0	1.1	.9	5.8	2.56	5.44	.250	3.00	.438	.438	1.67	
7X 3X .250/ .313T	9.15	104.2	12.5	95.7	1.4	.9	7.6	2.69	7.31	.250	3.00	.313	.313	2.14	
6X 3X .250/ .438T	9.55	95.7	12.9	87.5	1.3	.9	6.8	2.81	6.44	.250	3.00	.438	.438	1.92	
7X 3X .250/ .375T	9.79	112.6	13.9	106.6	1.5	.9	7.7	2.88	7.38	.250	3.00	.375	.375	2.16	
8X 3X .250/ .313T	10.00	126.9	14.7	125.9	1.6	1.0	8.6	2.94	8.31	.250	3.00	.313	.313	2.39	
7X 4X .250/ .313T	10.20	117.0	14.9	112.9	1.5	1.0	7.6	3.06	7.31	.250	4.00	.313	.313	2.14	
7X 3X .250/ .438T	10.40	120.4	15.2	117.4	1.5	1.0	7.7	3.06	7.44	.250	3.00	.438	.438	2.17	
8X 3X .250/ .375T	10.64	138.6	16.2	139.8	1.7	1.0	8.6	3.13	8.38	.250	3.00	.375	.375	2.41	
8X 4X .250/ .313T	11.05	143.8	17.3	147.9	1.7	1.0	8.5	3.25	8.31	.250	4.00	.313	.313	2.39	
8X 3X .250/ .438T	11.25	147.5	17.7	153.4	1.7	1.0	8.6	3.31	8.44	.250	3.00	.438	.438	2.42	
6X 5X .250/ .375T	11.49	112.2	16.7	110.9	1.5	1.0	6.6	3.38	6.38	.250	5.00	.375	.375	1.91	
8X 4X .250/ .375T	11.90	154.9	19.4	165.8	1.8	1.1	8.6	3.50	8.38	.250	4.00	.375	.375	2.41	
8X 5X .250/ .375T	12.34	140.1	19.6	148.3	1.7	1.1	7.6	3.63	7.38	.250	5.00	.375	.375	2.16	
6X 5X .250/ .438T	12.55	121.2	18.7	124.7	1.6	1.0	6.7	3.69	6.44	.250	5.00	.438	.438	1.92	
8X 4X .250/ .438T	12.75	165.6	21.5	184.4	1.9	1.1	8.6	3.75	8.44	.250	4.00	.438	.438	2.42	
8X 5X .250/ .375T	13.19	169.8	22.7	192.5	1.9	1.1	8.5	3.88	8.36	.250	5.00	.375	.375	2.41	
7X 5X .250/ .438T	13.40	150.4	21.9	166.2	1.8	1.1	7.6	3.94	7.44	.250	5.00	.438	.438	2.17	
6X 6X .250/ .438T	14.04	131.6	21.6	142.7	1.7	1.1	6.6	4.13	6.44	.250	6.00	.438	.438	1.92	
8X 5X .250/ .438T	14.25	181.1	25.2	214.6	2.0	1.2	8.5	4.19	8.44	.250	5.00	.438	.438	2.42	
9X 4X .313/ .375T	14.65	169.9	24.0	226.7	2.1	1.2	9.4	4.31	9.38	.313	4.00	.375	.375	3.33	
7X 6X .250/ .438T	14.89	162.3	25.2	188.6	1.9	1.2	7.5	4.38	7.44	.250	6.00	.438	.438	2.17	
9X 4X .313/ .438T	15.50	208.8	26.3	249.0	2.2	1.2	9.5	4.56	9.44	.313	4.00	.438	.438	3.35	
10X 4X .313/ .375T	15.74	221.8	27.5	284.3	2.3	1.3	10.3	4.63	10.38	.313	4.00	.375	.375	3.64	
8X 6X .250/ .438T	15.74	194.6	29.0	244.4	2.2	1.3	8.4	4.63	8.44	.250	6.00	.438	.438	2.42	
9X 5X .313/ .375T	15.95	205.2	27.6	259.0	2.2	1.3	9.4	4.69	9.38	.313	5.00	.375	.375	3.33	
9X 4X .313/ .500T	16.35	210.9	28.6	271.1	2.3	1.3	9.5	4.81	9.58	.313	4.00	.500	.500	3.36	
10X 4X .313/ .438T	16.59	233.5	30.0	311.0	2.5	1.3	10.4	4.88	10.44	.313	4.00	.438	.438	3.66	
10X 5X .313/ .375T	17.00	238.3	31.4	323.0	2.5	1.4	10.3	5.00	10.38	.313	5.00	.375	.375	3.64	
9X 4X .313/ .563T	17.20	220.8	31.0	294.1	2.4	1.3	9.5	5.06	9.56	.313	4.00	.563	.563	3.38	
10X 4X .313/ .500T	17.44	244.7	32.6	338.2	2.6	1.4	10.4	5.13	10.50	.313	4.00	.500	.500	3.68	
10X 5X .313/ .438T	18.05	251.1	34.6	355.5	2.6	1.4	10.3	5.31	10.44	.313	5.00	.438	.438	3.66	

1.2500 - 1 1/4 in.



1.250 IN. PLATE (AREA= 46.88 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS		R	YF	YB	***** BEAM DIMENSIONS *****		SHEAR AREA
	WT/FT	ZPL				AREA	DEPTH	
10X 4X .313/.563T	18.29	254.9	2.6	1.4	1.4	5.38	10.56	3.70
9X 6X .313/.438T	18.50	231.3	2.5	1.4	1.4	5.44	9.44	3.35
10X 5X .313/.500T	19.14	262.9	2.7	1.5	1.5	5.63	10.50	3.68
7X 7X .313/.500T	19.35	184.7	2.2	1.3	1.3	5.69	7.50	2.74
10X 6X .313/.438T	19.55	266.2	2.8	1.5	1.5	5.75	10.44	3.66
9X 6X .313/.500T	19.75	242.8	2.6	1.5	1.5	5.81	9.50	3.36
10X 5X .313/.563T	20.20	273.9	2.8	1.5	1.5	5.94	10.56	3.70
7X 7X .313/.563T	20.84	193.9	2.2	1.4	1.4	6.13	7.56	2.76
10X 6X .313/.500T	20.84	278.8	2.9	1.6	1.6	6.13	10.50	3.68
9X 7X .313/.500T	21.45	255.5	2.7	1.5	1.5	6.31	9.50	3.36
12X 4X .375/.469T	21.69	313.2	3.1	1.6	1.6	6.38	12.47	5.15
8X 7X .313/.563T	21.90	229.9	2.5	1.5	1.5	6.44	8.56	3.07
10X 6X .313/.563T	22.10	290.2	3.0	1.6	1.6	6.50	10.56	3.70
10X 7X .313/.500T	22.54	292.5	3.0	1.7	1.7	6.63	10.50	3.68
12X 4X .375/.531T	22.54	324.4	3.2	1.7	1.7	6.63	12.53	5.17
12X 5X .375/.469T	23.26	332.3	3.3	1.7	1.7	6.84	12.47	5.15
12X 4X .375/.594T	23.39	335.0	3.3	1.8	1.8	6.88	12.59	5.19
7X 7X .375/.625T	23.80	203.0	2.4	1.5	1.5	7.06	7.63	3.33
10X 7X .313/.563T	24.00	304.1	3.1	1.7	1.7	7.13	10.56	3.70
12X 4X .375/.656T	24.24	344.7	3.4	1.8	1.8	7.13	12.66	5.22
12X 5X .375/.531T	24.34	344.3	3.4	1.8	1.8	7.16	12.53	5.17
9X 8X .313/.563T	24.85	277.9	3.0	1.7	1.7	7.31	9.56	3.30
12X 6X .375/.469T	24.85	348.7	3.4	1.8	1.8	7.31	12.47	5.15
12X 5X .375/.594T	25.40	355.2	3.5	1.9	1.9	7.47	12.59	5.19
10X 8X .313/.563T	25.94	316.6	3.3	1.8	1.8	7.63	10.56	3.70
12X 6X .375/.531T	26.15	361.3	3.6	1.9	1.9	7.69	12.53	5.17
12X 5X .375/.656T	26.45	365.8	3.6	1.9	1.9	7.78	12.66	5.22
12X 7X .375/.469T	26.45	363.2	3.6	1.9	1.9	7.78	12.47	5.15
7X 7X .438/.688T	26.79	211.5	2.5	1.6	1.6	7.88	7.69	3.92
12X 6X .375/.594T	27.40	372.8	3.7	2.0	2.0	8.06	12.59	5.19
12X 7X .375/.531T	27.95	376.3	3.7	2.0	2.0	8.22	12.53	5.17
7X 7X .438/.750T	28.25	218.6	2.5	1.6	1.6	8.31	7.75	3.94
12X 6X .375/.656T	28.70	383.5	3.8	2.1	2.1	8.44	12.66	5.22
12X 7X .375/.594T	29.44	387.9	3.9	2.1	2.1	8.66	12.59	5.19
14X 5X .438/.531T	29.85	422.0	4.1	2.2	2.2	8.78	14.53	6.91
14X 5X .438/.594T	30.91	433.2	4.2	2.3	2.3	9.09	14.59	6.94
12X 7X .375/.656T	30.91	399.1	4.0	2.2	2.2	9.09	12.66	5.22
31.45	401.1	77.8	4.0	2.2	2.2	9.25	12.59	5.19
14X 6X .438/.531T	31.65	439.6	4.2	2.3	2.3	9.31	14.53	6.91
14X 5X .438/.656T	31.99	444.2	4.3	2.3	2.3	9.41	14.66	6.97
7X 7X .500/.875T	32.74	231.8	2.7	1.8	1.8	9.63	7.88	4.57
14X 6X .438/.594T	32.95	451.4	4.4	2.4	2.4	9.69	14.59	6.94
14X 5X .438/.719T	33.05	454.1	4.4	2.4	2.4	9.72	14.72	6.99
12X 8X .375/.656T	33.15	412.3	4.1	2.4	2.4	9.75	12.66	5.22
7X 6X .563/1.000T	33.80	232.8	2.7	1.8	1.8	9.94	8.00	5.21

1.2500 - 1 1/4 in.

1.250 IN. PLATE (AREA= 46.88 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			***** BEAM DIMENSIONS *****			SHEAR								
			WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WEB	WIDTH	FLANGE	THICK	AREA
14X 6X	.438/	.656T	34.20	462.7	85.4	1147.3	4.5	2.5	13.4	10.06	14.66	.438	.438	6.00	.656	.656	6.97
14X 7X	.438/	.594T	34.95	467.3	88.7	1180.9	4.5	2.5	13.3	10.28	14.59	.438	.438	7.00	.594	.594	6.94
12X 9X	.375/	.656T	35.39	423.8	92.8	1051.5	4.3	2.5	11.4	10.41	12.66	.375	.375	9.00	.656	.656	5.22
14X 6X	.438/	.719T	35.58	473.0	90.6	1214.6	4.6	2.6	13.4	10.44	14.72	.438	.438	6.00	.719	.719	6.99
14X 7X	.438/	.656T	36.45	476.7	94.7	1258.4	4.7	2.6	13.3	10.72	14.66	.438	.438	7.00	.656	.656	6.97
14X 8X	.438/	.594T	36.99	481.4	97.3	1281.5	4.7	2.7	13.2	10.88	14.59	.438	.438	8.00	.594	.594	6.94
7X 7X	.563/1.000T		37.28	243.1	52.4	459.5	2.8	1.9	7.4	18.94	8.88	.563	.563	7.00	1.000	.563	5.21
16X 5X	.500/	.594T	37.30	512.5	90.9	1377.2	4.9	2.7	15.2	10.97	16.59	.500	.500	5.00	.594	.594	8.92
14X 7X	.438/	.719T	37.94	489.4	100.9	1335.8	4.8	2.7	13.2	11.16	14.72	.438	.438	7.00	.719	.719	6.99
16X 5X	.500/	.656T	38.35	523.1	95.6	1447.5	5.0	2.8	15.1	11.28	16.66	.500	.500	5.00	.656	.656	8.96
14X 8X	.438/	.656T	38.69	492.7	104.1	1367.1	4.8	2.8	13.1	11.38	14.66	.438	.438	8.00	.656	.656	6.97
16X 6X	.500/	.594T	39.30	531.0	100.4	1506.7	5.1	2.8	15.0	11.56	16.59	.500	.500	6.00	.594	.594	8.92
16X 5X	.500/	.719T	39.41	533.3	100.4	1519.0	5.1	2.8	15.1	11.59	16.72	.500	.500	5.00	.719	.719	8.99
12X 9X	.438/	.719T	39.85	433.5	101.6	1149.7	4.4	2.7	11.3	11.72	12.72	.438	.438	9.00	.719	.719	6.12
14X 8X	.438/	.719T	40.39	503.3	111.8	1452.7	5.0	2.9	13.1	11.88	14.72	.438	.438	8.00	.719	.719	6.99
16X 6X	.500/	.656T	40.60	542.3	106.3	1591.2	5.2	2.9	15.0	11.94	16.66	.500	.500	6.00	.656	.656	8.96
16X 7X	.500/	.594T	41.34	547.2	118.0	1634.4	5.3	3.0	14.9	12.16	16.59	.500	.500	7.00	.594	.594	8.92
7X 7X	.625/1.125T		41.85	253.3	69.5	511.7	2.9	2.0	7.4	12.25	8.13	.625	.625	7.00	1.125	.625	5.86
16X 6X	.500/	.719T	41.85	553.8	112.1	1674.6	5.3	3.0	14.9	12.31	16.72	.500	.500	6.00	.719	.719	8.99
16X 5X	.500/	.875T	42.09	556.6	112.6	1697.4	5.4	3.0	15.1	12.38	16.88	.500	.500	5.00	.875	.875	9.07
12X10X	.438/	.719T	42.38	443.6	110.5	1236.1	4.6	2.8	11.2	12.44	12.72	.438	.438	10.00	.719	.719	6.12
16X 7X	.500/	.656T	42.61	558.9	116.8	1729.7	5.4	3.1	14.8	12.59	16.66	.500	.500	7.00	.656	.656	8.96
14X 9X	.438/	.719T	42.81	515.7	121.2	1567.7	5.1	3.0	12.9	12.59	14.72	.438	.438	9.00	.719	.719	6.99
16X 7X	.500/	.719T	44.30	569.9	123.6	1825.7	5.5	3.2	14.8	13.03	16.72	.500	.500	7.00	.719	.719	8.99
16X 6X	.500/	.875T	45.05	576.9	126.6	1881.7	5.6	3.3	14.9	13.25	16.88	.500	.500	6.00	.875	.875	9.07
16X 8X	.500/	.656T	45.05	573.6	127.3	1865.8	5.6	3.3	14.7	13.25	16.66	.500	.500	8.00	.656	.656	8.96
14X10X	.438/	.719T	45.25	526.6	131.4	1679.3	5.3	3.2	12.8	13.31	14.72	.438	.438	18.00	.719	.719	6.99
7X 7X	.688/1.250T		46.10	262.6	76.7	563.9	3.1	2.1	7.4	13.56	8.25	.688	.688	7.00	1.250	.688	6.54
16X 8X	.500/	.719T	46.75	584.8	135.2	1973.8	5.7	3.4	14.6	13.75	16.72	.500	.500	8.00	.719	.719	8.99
16X 9X	.500/	.656T	47.29	586.8	137.9	2008.1	5.7	3.4	14.5	13.91	16.66	.500	.500	9.00	.656	.656	8.96
18X 6X	.563/	.656T	47.80	622.2	130.3	2145.4	5.9	3.4	16.5	14.06	18.66	.563	.563	6.00	.656	.656	11.21
16X 7X	.500/	.875T	48.04	594.4	140.7	2062.7	5.8	3.5	14.7	14.13	16.88	.500	.500	7.00	.875	.875	9.07
18X 6X	.563/	.719T	49.10	633.3	137.8	2248.9	6.1	3.6	16.4	14.44	18.72	.563	.563	6.00	.719	.719	11.24
16X 9X	.500/	.719T	49.20	597.9	146.8	2117.5	5.9	3.5	14.4	14.47	16.72	.500	.500	9.00	.719	.719	8.99
16X 8X	.500/	.875T	51.00	689.4	154.7	2237.1	6.0	3.7	14.5	15.00	16.88	.500	.500	8.00	.875	.875	9.07
18X 7X	.563/	.719T	51.54	650.7	149.8	2431.9	6.3	3.7	16.2	15.16	18.72	.563	.563	7.00	.719	.719	11.24
16X10X	.500/	.719T	51.65	609.6	158.3	2250.7	6.0	3.7	14.3	15.19	16.72	.500	.500	10.00	.719	.719	8.99
18X 8X	.563/	.656T	52.29	654.8	154.0	2482.3	6.3	3.8	16.1	15.38	18.66	.563	.563	8.00	.656	.656	11.21
14X10X	.500/	.875T	53.55	548.7	156.6	1965.1	5.6	3.6	12.5	15.75	14.88	.500	.500	18.00	.875	.875	8.87
16X 9X	.500/	.875T	53.99	622.5	168.8	2407.8	6.2	3.9	14.3	15.88	16.88	.500	.500	9.00	.875	.875	9.07
18X 8X	.563/	.719T	53.99	666.1	162.6	2610.2	6.4	3.9	16.1	15.88	18.72	.563	.563	8.00	.719	.719	11.24
18X 9X	.563/	.656T	54.50	668.4	165.7	2643.3	6.5	4.0	16.0	16.03	18.66	.563	.563	9.00	.656	.656	11.21
18X 6X	.563/1.000T		54.84	675.4	165.9	2696.7	6.5	4.0	16.3	16.13	19.88	.563	.563	6.00	1.000	.563	11.48
18X 7X	.563/	.875T	55.25	676.1	168.7	2717.6	6.6	4.0	16.1	16.25	18.88	.563	.563	7.00	.875	.875	11.33
18X 9X	.563/	.719T	56.41	680.0	175.4	2784.9	6.6	4.1	15.9	16.59	18.72	.563	.563	9.00	.719	.719	11.24

1.2500 - 1 1/4 in.



1.250 IN. PLATE (AREA= 46.88 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM		FLANGE		SHEAR		
		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
16X10X	.500/.875T	56.95	633.9	182.7	2571.6	6.4	4.1	14.1	16.75	16.88	.500	18.00	.875	9.07
18X10X	.563/.719T	58.85	692.5	188.3	2957.1	6.8	4.3	15.7	17.31	18.72	.563	18.00	.719	11.24
18X 8X	.563/1.000T	61.64	709.8	201.5	3178.6	7.0	4.5	15.8	18.13	19.00	.563	8.00	1.000	11.40
18X11X	.563/.875T	67.15	729.3	231.0	3531.3	7.3	4.8	15.3	19.75	18.88	.563	11.00	.875	11.33
18X10X	.563/1.000T	68.44	736.1	237.2	3632.3	7.4	4.9	15.3	20.13	19.00	.563	10.00	1.000	11.40
18X12X	.563/.875T	70.14	739.1	246.4	3720.0	7.4	5.0	15.1	20.63	18.88	.563	12.00	.875	11.33
18X 9X	.625/1.125T	72.69	739.3	244.1	3740.1	7.4	5.1	15.3	21.38	19.13	.625	9.00	1.125	12.74
21X 9X	.688/.875T	75.85	832.1	257.0	4541.0	8.1	5.5	17.7	22.31	21.88	.688	9.00	.875	15.91
21X10X	.688/.875T	78.85	845.9	274.9	4799.5	8.3	5.7	17.5	23.19	21.88	.688	10.00	.875	15.91
21X 8X	.688/1.125T	79.70	853.9	278.5	4910.0	8.4	5.8	17.6	23.44	22.13	.688	8.00	1.125	16.09
21X11X	.688/.875T	81.80	858.3	292.8	5050.4	8.4	5.9	17.2	24.06	21.88	.688	11.00	.875	15.91
21X 9X	.688/1.125T	83.50	869.3	301.3	5231.0	8.6	6.0	17.4	24.56	22.13	.688	9.00	1.125	16.09
21X12X	.688/.875T	84.80	869.5	310.7	5295.1	8.6	6.1	17.0	24.94	21.88	.688	12.00	.875	15.91
21X10X	.688/1.125T	87.35	882.8	324.8	5541.5	8.7	6.3	17.1	25.69	22.13	.688	10.00	1.125	16.09
21X13X	.688/.875T	87.75	879.7	328.3	5530.4	8.7	6.3	16.8	25.81	21.88	.688	13.00	.875	15.91
24X10X	.750/.875T	98.95	975.7	335.8	6528.4	9.4	6.7	19.4	26.75	24.88	.750	10.00	.875	19.60
24X 8X	.750/1.125T	91.80	983.9	339.7	6661.9	9.5	6.8	19.6	27.00	25.13	.750	8.00	1.125	19.79
24X11X	.750/.875T	93.94	989.2	355.8	6838.2	9.6	6.9	19.2	27.63	24.88	.750	11.00	.875	19.60
24X 9X	.750/1.125T	95.64	1000.9	365.4	7061.5	9.7	7.1	19.3	28.13	25.13	.750	9.00	1.125	19.79
24X12X	.750/.875T	96.90	1001.8	376.0	7143.1	9.7	7.1	19.0	28.50	24.88	.750	12.00	.875	19.60
24X10X	.750/1.125T	99.45	1016.3	391.2	7451.5	9.9	7.3	19.0	29.25	25.13	.750	10.00	1.125	19.79
24X13X	.750/.875T	99.89	1013.5	396.4	7445.4	9.9	7.3	18.8	29.38	24.88	.750	13.00	.875	19.60
21X14X	.688/1.125T	102.65	925.2	415.3	6701.8	9.3	7.2	16.1	30.19	22.13	.688	14.00	1.125	16.09
21X15X	.688/1.125T	106.45	933.5	438.0	6970.1	9.4	7.5	15.9	31.31	22.13	.688	15.00	1.125	16.09
24X12X	.750/1.125T	107.10	1042.6	442.6	8196.5	10.2	7.9	18.5	31.50	25.13	.750	12.00	1.125	19.79
24X13X	.750/1.125T	110.94	1054.1	468.5	8556.1	10.4	8.1	18.3	32.63	25.13	.750	13.00	1.125	19.79
27X 9X	.875/1.500T	126.24	1191.3	529.8	10909.8	11.4	9.2	20.6	37.13	28.50	.875	9.00	1.500	26.03
27X10X	.875/1.375T	127.09	1192.8	537.4	10975.5	11.4	9.2	20.4	37.38	28.38	.875	10.00	1.375	25.93
27X13X	.875/1.125T	130.05	1197.4	562.4	11242.4	11.5	9.4	20.8	38.25	28.13	.875	13.00	1.125	25.71
27X10X	.875/1.500T	131.34	1208.7	567.5	11488.5	11.6	9.5	20.2	38.63	28.50	.875	10.00	1.500	26.03
27X11X	.875/1.375T	131.75	1207.8	572.1	11503.3	11.6	9.5	20.1	38.75	28.38	.875	11.00	1.375	25.93
27X14X	.875/1.125T	133.89	1209.4	591.8	11663.7	11.6	9.6	19.7	39.38	28.13	.875	14.00	1.125	25.71
27X15X	.875/1.125T	137.70	1228.4	619.1	12067.7	11.8	9.9	19.5	40.50	28.13	.875	15.00	1.125	25.71
30X10X1	.000/1.375T	146.64	1251.4	688.5	13113.9	12.1	10.5	19.3	43.13	28.50	.875	13.00	1.500	26.03
30X10X1	.000/1.375T	148.75	1340.5	640.3	14339.7	12.5	10.5	22.1	43.75	31.38	1.000	10.00	1.375	32.63
30X10X1	.000/1.500T	153.08	1359.0	673.2	14744.3	12.7	10.8	21.9	45.00	31.50	1.000	10.00	1.500	32.75
30X11X1	.000/1.375T	153.44	1358.1	678.4	14762.3	12.7	10.9	21.8	45.13	31.38	1.000	11.00	1.375	32.63
30X10X1	.000/1.750T	161.50	1392.9	738.5	15926.4	13.0	11.4	21.6	47.50	31.75	1.000	10.00	1.750	33.00

1.2500 - 1 1/4 in.

1.375 IN. PLATE (AREA= 56.72 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	Y <sub>P</sub>	V <sub>F</sub>	AREA	DEPTH	WEB THICK	DIMENSIONS		SHEAR AREA
WT/FT	Z <sub>PL</sub>	Z <sub>FL</sub>	INERTIA	WIDTH							THICK		
3X 2X .125/.188T	2.55	22.5	4.3	16.3	.5	.7	3.8	.75	3.19	.125	2.00	.188	.57
4X 2X .125/.188T	2.99	29.2	4.5	21.7	.6	.7	4.8	.88	4.19	.125	2.00	.188	.70
3X 2X .188/.250T	3.60	25.7	4.9	19.1	.6	.7	3.9	1.06	3.25	.188	2.00	.250	.87
3X 2X .188/.313T	4.05	28.0	5.3	21.0	.6	.8	3.9	1.19	3.31	.188	2.00	.313	.88
3X 3X .188/.250T	4.45	24.9	5.9	22.7	.6	.8	3.9	1.31	3.25	.188	3.00	.250	.87
4X 2X .188/.313T	4.69	38.3	6.0	29.7	.7	.8	4.9	1.38	4.31	.188	2.00	.313	1.07
5X 2X .188/.250T	4.90	46.5	6.3	36.7	.8	.8	5.8	1.44	5.25	.188	2.00	.250	1.25
5X 2X .188/.313T	5.30	51.1	7.0	40.9	.8	.8	5.9	1.56	5.31	.188	2.00	.313	1.26
6X 2X .188/.313T	5.95	67.0	8.1	55.7	1.0	.8	6.9	1.75	6.31	.188	2.00	.313	1.44
6X 3X .188/.250T	6.39	72.2	9.0	61.1	1.0	.8	6.8	1.88	6.25	.188	3.00	.250	1.44
4X 4X .188/.313T	6.80	52.9	9.0	43.6	.9	.8	4.9	2.00	4.31	.188	4.00	.313	1.07
6X 3X .188/.313T	7.00	80.2	10.2	69.5	1.1	.9	6.8	2.06	6.31	.188	3.00	.313	1.44
5X 4X .188/.313T	7.45	71.1	10.5	61.4	1.0	.9	5.8	2.19	5.31	.188	4.00	.313	1.26
6X 4X .188/.313T	8.09	92.5	12.3	83.6	1.2	.9	6.8	2.38	6.31	.188	4.00	.313	1.44
5X 3X .250/.438T	8.70	76.4	11.4	67.7	1.1	.9	5.9	2.56	5.44	.250	3.00	.438	1.70
7X 3X .250/.313T	9.15	108.0	13.0	101.0	1.3	.9	7.7	2.69	7.31	.250	3.00	.313	2.17
6X 3X .250/.438T	9.55	99.5	13.5	92.8	1.2	.9	6.9	2.81	6.44	.250	3.00	.438	1.95
7X 3X .250/.375T	9.79	117.0	14.4	112.2	1.4	1.0	7.8	2.88	7.38	.250	3.00	.375	2.19
8X 3X .250/.313T	10.00	134.0	15.2	131.8	1.5	1.0	8.7	2.94	8.31	.250	3.00	.313	2.42
7X 4X .250/.313T	10.20	121.8	15.4	118.7	1.4	1.0	7.7	3.08	7.31	.250	4.00	.313	2.17
7X 3X .250/.438T	10.40	125.5	15.7	123.3	1.4	1.0	7.8	3.06	7.44	.250	3.00	.438	2.20
8X 3X .250/.375T	10.64	144.5	16.7	146.2	1.6	1.0	8.7	3.13	8.38	.250	3.00	.375	2.44
8X 4X .250/.313T	11.05	150.2	17.8	154.5	1.6	1.0	8.7	3.25	8.31	.250	3.00	.313	2.42
8X 3X .250/.438T	11.25	154.3	18.2	160.1	1.6	1.0	8.8	3.31	8.44	.250	3.00	.438	2.45
8X 5X .250/.375T	11.49	117.6	17.3	116.9	1.4	1.0	6.8	3.38	6.38	.250	5.00	.375	1.94
8X 4X .250/.375T	11.90	162.6	19.9	173.0	1.7	1.1	8.7	3.50	8.38	.250	4.00	.375	2.44
7X 5X .250/.375T	12.34	147.3	20.2	155.3	1.6	1.1	7.7	3.63	7.38	.250	5.00	.375	2.19
6X 5X .250/.438T	12.55	127.5	19.3	131.3	1.5	1.0	6.8	3.69	6.44	.250	5.00	.438	1.95
8X 4X .250/.438T	12.75	174.6	22.0	192.1	1.8	1.1	8.7	3.75	8.44	.250	4.00	.438	2.45
8X 5X .250/.375T	13.19	179.4	23.2	200.5	1.8	1.1	8.6	3.88	8.38	.250	5.00	.375	2.44
7X 5X .250/.438T	13.40	158.9	22.5	173.8	1.7	1.1	7.7	3.94	7.44	.250	5.00	.438	2.28
6X 6X .250/.438T	14.04	139.3	22.3	150.1	1.6	1.1	6.7	4.13	6.44	.250	6.00	.438	1.95
8X 5X .250/.438T	14.25	192.3	25.8	223.3	1.9	1.2	8.7	4.19	8.44	.250	5.00	.438	2.45
9X 4X .313/.375T	14.65	201.6	24.6	235.6	2.0	1.2	9.6	4.31	9.38	.313	4.00	.375	3.37
7X 6X .250/.438T	14.89	172.6	25.8	198.1	1.8	1.1	7.7	4.38	7.44	.250	6.00	.438	2.20
9X 4X .313/.438T	15.50	214.0	26.9	258.6	2.1	1.2	9.6	4.56	9.44	.313	4.00	.438	3.39
10X 4X .313/.375T	15.74	236.9	28.0	294.6	2.2	1.2	10.5	4.63	10.38	.313	4.00	.375	3.68
8X 6X .250/.438T	15.95	208.1	29.6	254.3	2.0	1.2	8.6	4.63	8.44	.250	6.00	.438	2.45
9X 5X .313/.375T	15.95	219.2	28.2	269.0	2.1	1.2	9.5	4.69	9.38	.313	5.00	.375	3.37
9X 4X .313/.500T	16.35	225.7	29.2	281.5	2.1	1.2	9.6	4.81	9.50	.313	4.00	.500	3.40
10X 4X .313/.438T	16.59	250.5	30.6	322.2	2.3	1.3	10.5	4.88	10.44	.313	4.00	.438	3.70
10X 5X .313/.375T	17.00	256.1	32.0	334.6	2.3	1.3	10.4	5.00	10.38	.313	5.00	.375	3.68
9X 4X .313/.563T	17.20	237.2	31.6	305.3	2.2	1.3	9.6	5.06	9.56	.313	4.00	.563	3.42
10X 4X .313/.500T	17.44	263.5	33.2	350.3	2.4	1.3	10.5	5.13	10.50	.313	4.00	.500	3.72
10X 5X .313/.438T	18.05	271.1	35.2	368.3	2.4	1.4	10.5	5.31	10.44	.313	5.00	.438	3.70

1.3750 - 1 3/8 in.



1.375 IN. PLATE (AREA= 56.72 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS			FLANGE			SHEAR AREA			
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
10X 4X	.313/ .563T	18.29	275.6	35.8	378.0	2.5	1.4	10.6	5.38	10.56	.313	4.00	.563	3.74
9X 6X	.313/ .438T	18.50	249.8	35.4	335.0	2.3	1.3	9.5	5.44	9.44	.313	6.00	.438	3.39
10X 5X	.313/ .500T	19.14	285.2	38.5	402.6	2.5	1.4	10.5	5.63	10.50	.313	5.00	.500	3.72
7X 7X	.313/ .500T	19.35	199.4	33.6	255.2	2.0	1.3	7.6	5.69	7.50	.313	7.00	.500	2.78
10X 6X	.313/ .438T	19.55	289.2	39.8	413.6	2.6	1.4	10.4	5.75	10.44	.313	6.00	.438	3.70
9X 6X	.313/ .500T	19.75	263.5	38.8	368.2	2.4	1.4	9.5	5.81	9.50	.313	6.00	.500	3.40
10X 5X	.313/ .563T	20.20	298.4	41.7	435.8	2.6	1.5	10.5	5.94	10.56	.313	5.00	.563	3.74
7X 7X	.313/ .563T	20.84	210.3	36.9	280.3	2.1	1.3	7.6	6.13	7.56	.313	7.00	.563	2.80
10X 6X	.313/ .500T	20.64	304.4	43.8	454.5	2.7	1.5	10.4	6.13	10.50	.313	6.00	.500	3.72
9X 7X	.313/ .500T	21.45	279.0	43.6	410.2	2.6	1.5	9.4	6.31	9.50	.313	7.00	.500	3.40
12X 4X	.375/ .469T	21.69	342.5	43.1	530.5	2.9	1.5	12.3	6.38	12.47	.375	4.00	.469	5.19
8X 7X	.313/ .563T	21.90	250.8	42.3	359.3	2.4	1.4	8.5	6.44	8.56	.313	7.00	.563	3.11
10X 6X	.313/ .563T	22.10	318.2	47.6	494.5	2.8	1.6	10.4	6.50	10.56	.313	6.00	.563	3.74
10X 7X	.313/ .500T	22.54	321.2	49.0	505.1	2.8	1.6	10.3	6.63	10.50	.313	7.00	.500	3.72
12X 4X	.375/ .531T	22.54	355.9	46.2	568.7	3.0	1.6	12.3	6.63	12.53	.375	4.00	.531	5.21
12X 5X	.375/ .469T	23.26	365.5	49.0	598.5	3.1	1.6	12.2	6.84	12.47	.375	5.00	.469	5.19
12X 4X	.375/ .594T	23.39	368.7	49.3	607.1	3.1	1.6	12.3	6.88	12.59	.375	4.00	.594	5.24
7X 7X	.375/ .625T	23.80	221.7	41.1	312.4	2.2	1.4	7.6	7.00	7.63	.375	7.00	.625	3.38
10X 7X	.313/ .563T	24.00	335.4	53.5	551.0	2.9	1.6	10.3	7.06	10.56	.313	7.00	.563	3.74
12X 4X	.375/ .656T	24.24	380.3	52.2	644.5	3.2	1.7	12.3	7.13	12.66	.375	4.00	.656	5.26
12X 5X	.375/ .531T	24.34	380.1	52.9	645.5	3.2	1.7	12.2	7.16	12.53	.375	5.00	.531	5.21
9X 8X	.313/ .563T	24.85	306.7	53.2	495.4	2.8	1.6	9.3	7.31	9.56	.313	8.00	.563	3.42
12X 6X	.375/ .469T	24.85	385.5	54.9	665.0	3.2	1.7	12.1	7.31	12.47	.375	6.00	.469	5.19
12X 5X	.375/ .594T	25.40	393.4	56.6	691.1	3.3	1.8	12.2	7.47	12.59	.375	5.00	.594	5.24
10X 8X	.313/ .563T	25.94	351.2	58.6	608.2	3.1	1.7	10.2	7.63	10.56	.313	8.00	.563	3.74
12X 6X	.375/ .531T	26.15	401.0	59.5	720.4	3.3	1.8	12.1	7.69	12.53	.375	6.00	.531	5.21
12X 5X	.375/ .656T	26.45	406.4	60.4	738.1	3.4	1.8	12.2	7.78	12.66	.375	5.00	.656	5.26
12X 7X	.375/ .469T	26.45	403.4	60.7	730.7	3.4	1.8	12.0	7.78	12.47	.375	7.00	.469	5.19
7X 7X	.438/ .688T	26.79	232.3	45.5	344.9	2.3	1.5	7.6	7.88	7.69	.438	7.00	.688	3.97
12X 6X	.375/ .594T	27.40	415.1	64.0	774.4	3.5	1.9	12.1	8.06	12.59	.375	6.00	.594	5.24
12X 7X	.375/ .531T	27.95	419.7	66.2	794.6	3.5	1.9	12.0	8.22	12.53	.375	7.00	.531	5.21
7X 7X	.438/ .750T	28.25	241.0	48.8	370.1	2.4	1.5	7.6	8.31	7.75	.438	7.00	.750	4.00
12X 6X	.375/ .656T	28.70	428.5	68.6	829.5	3.6	1.9	12.1	8.44	12.66	.375	6.00	.656	5.26
12X 7X	.375/ .594T	29.44	434.1	71.4	856.7	3.6	2.0	12.0	8.66	12.59	.375	7.00	.594	5.24
14X 5X	.438/ .531T	29.85	472.0	68.4	950.1	3.8	2.0	13.9	8.78	14.53	.438	5.00	.531	6.97
14X 5X	.438/ .594T	30.91	485.8	72.7	1009.6	3.9	2.1	13.9	9.09	14.59	.438	5.00	.594	6.99
12X 7X	.375/ .656T	30.91	448.1	76.8	920.0	3.7	2.1	12.0	9.09	12.66	.375	7.00	.656	5.26
12X 8X	.375/ .594T	31.45	450.9	78.8	937.0	3.8	2.1	11.9	9.25	12.59	.375	8.00	.594	5.24
14X 6X	.438/ .531T	31.65	493.8	76.0	1048.1	4.0	2.1	13.8	9.31	14.53	.438	6.00	.531	6.97
14X 5X	.438/ .656T	31.99	499.3	77.1	1071.4	4.0	2.1	13.9	9.41	14.66	.438	5.00	.656	7.02
7X 7X	.500/ .875T	32.74	257.5	56.3	427.4	2.5	1.7	7.6	9.63	7.88	.500	7.00	.875	4.63
14X 6X	.438/ .594T	32.95	508.4	81.3	1118.6	4.1	2.2	13.8	9.69	14.59	.438	6.00	.594	6.99
14X 5X	.438/ .719T	33.05	511.6	81.4	1130.6	4.1	2.2	13.9	9.72	14.72	.438	5.00	.719	7.05
12X 8X	.375/ .656T	33.15	465.0	85.0	1008.4	3.9	2.2	11.9	9.75	12.66	.375	8.00	.656	5.26
7X 6X	.563/1.000T	33.60	258.7	56.2	432.8	2.5	1.7	7.7	9.94	8.00	.563	6.00	1.000	5.28

1.3750 - 1 3/8 in.

10.012 TN. PLATE AREA= 20.12 CM.TN.1

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS										FLANGE		SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA			
14X 6X .438/ .656T	34.20	522.5	86.5	1190.2	4.2	2.3	13.8	10.06	14.66	.438	6.00	.656	7.02					
14X 7X .438/ .594T	34.95	528.4	89.8	1225.7	4.3	2.3	13.6	10.28	14.59	.438	7.00	.594	6.99					
12X 9X .375/ .656T	35.39	479.8	93.1	1094.5	4.0	2.3	11.8	10.41	12.66	.375	9.00	.656	5.26					
12X 6X .438/ .719T	35.50	535.4	91.8	1260.9	4.3	2.4	13.7	10.44	14.72	.438	6.00	.656	7.05					
14X 7X .438/ .656T	36.45	542.7	95.9	1307.1	4.4	2.4	13.6	10.72	14.66	.438	7.00	.656	7.02					
14X 8X .438/ .594T	36.99	546.2	98.4	1331.7	4.4	2.4	13.5	10.88	14.59	.438	8.00	.594	6.99					
7X 7X .563/1.000T	37.20	271.8	63.6	483.5	2.7	1.8	7.6	10.94	8.00	.563	7.00	1.000	5.28					
16X 5X .500/ .594T	37.30	580.6	92.1	1428.4	4.6	2.5	15.5	10.97	16.59	.500	5.00	.594	8.98					
14X 7X .438/ .719T	37.94	556.1	102.1	1380.7	4.5	2.5	13.6	11.16	14.72	.438	7.00	.719	7.05					
16X 5X .500/ .656T	38.35	593.6	96.9	1502.0	4.7	2.5	15.5	11.28	16.66	.500	5.00	.656	9.02					
14X 8X .438/ .656T	38.69	560.5	105.3	1421.9	4.6	2.5	13.5	11.38	14.66	.438	8.00	.656	7.02					
39X 30 603.5	39.30	603.5	101.8	1564.3	4.8	2.6	15.4	11.56	16.59	.500	6.00	.594	8.98					
16X 5X .500/ .719T	39.41	606.3	101.8	1577.0	4.8	2.6	15.5	11.59	16.72	.500	5.00	.719	9.05					
12X 9X .438/ .719T	39.85	492.8	102.9	1199.5	4.2	2.4	11.7	11.72	12.72	.438	9.00	.719	6.17					
40X 39 573.9	40.39	573.9	112.4	1512.4	4.7	2.6	13.5	11.88	14.72	.438	8.00	.719	7.05					
16X 6X .500/ .656T	40.60	617.6	107.6	1653.1	4.9	2.7	15.4	11.94	16.66	.500	6.00	.656	9.02					
41X 34 623.9	41.34	623.9	111.4	1698.6	5.0	2.7	15.2	12.16	16.59	.500	7.00	.594	8.98					
7X 7X .625/1.125T	41.65	284.7	70.9	539.5	2.8	1.9	7.6	12.25	8.13	.625	7.00	1.125	5.94					
16X 6X .500/ .719T	41.85	630.9	113.5	1740.8	5.0	2.8	15.3	12.31	16.72	.500	6.00	.719	9.05					
16X 5X .500/ .815T	42.09	635.2	114.0	1764.6	5.1	2.8	15.5	12.38	16.88	.500	5.00	.815	9.13					
12X 10X .438/ .719T	42.30	506.0	111.9	1291.5	4.3	2.6	11.5	12.44	12.72	.438	10.00	.719	6.17					
16X 7X .500/ .656T	42.81	638.5	118.2	1799.2	5.1	2.8	15.2	12.59	16.66	.500	7.00	.656	9.02					
14X 9X .438/ .719T	42.81	590.0	122.7	1634.5	4.9	2.8	13.2	12.59	14.72	.438	9.00	.719	7.05					
16X 7X .500/ .719T	44.30	652.2	125.2	1900.5	5.2	2.9	15.2	13.03	16.72	.500	7.00	.719	9.05					
16X 6X .500/ .815T	45.05	660.8	128.2	1959.4	5.3	3.0	15.1	13.25	16.88	.500	6.00	.815	9.13					
16X 8X .500/ .656T	45.05	657.0	128.9	1943.1	5.3	3.0	15.1	13.25	16.66	.500	8.00	.656	9.02					
14X 10X .438/ .719T	45.25	604.0	132.9	1753.4	5.0	2.9	13.2	13.31	14.72	.438	10.00	.719	7.05					
7X 7X .688/1.250T	46.10	296.5	78.2	599.7	2.9	2.0	7.6	13.56	8.25	.688	7.00	1.250	6.82					
16X 8X .500/ .719T	46.75	671.2	136.9	2057.5	5.4	3.1	15.0	13.75	16.72	.500	8.00	.719	9.05					
16X 9X .500/ .656T	47.29	673.7	139.6	2085.7	5.4	3.1	14.9	13.91	16.66	.500	9.00	.656	9.02					
18X 6X .563/ .656T	47.80	713.3	132.1	2233.0	5.6	3.1	16.9	14.06	18.66	.563	6.00	.656	11.28					
16X 7X .500/ .815T	48.04	683.0	142.4	2151.6	5.5	3.2	15.1	14.13	16.88	.500	7.00	.815	9.13					
18X 6X .563/ .719T	49.10	727.1	138.8	2342.2	5.7	3.2	16.9	14.44	18.72	.563	6.00	.719	11.31					
16X 9X .500/ .719T	49.20	687.8	148.5	2210.4	5.6	3.2	14.9	14.47	16.72	.500	9.00	.719	9.05					
16X 8X .500/ .815T	51.00	702.2	156.6	2337.4	5.7	3.3	14.9	15.00	16.88	.500	8.00	.815	9.13					
18X 7X .563/ .719T	51.54	748.9	151.8	2536.1	5.9	3.4	16.7	15.16	18.72	.563	7.00	.719	11.31					
500/ .719T	51.65	702.9	160.2	2361.1	5.7	3.4	14.7	15.19	16.72	.500	10.00	.719	9.05					
16X 10X .500/ .656T	52.29	754.0	156.0	2589.7	6.0	3.4	16.6	15.38	18.66	.563	8.00	.656	11.28					
14X 10X .500/ .815T	53.55	632.8	158.5	2060.4	5.3	3.3	13.0	15.75	14.88	.500	10.00	.815	8.13					
16X 9X .500/ .815T	53.99	719.1	170.8	2520.0	5.9	3.5	14.8	15.88	16.88	.500	9.00	.815	9.13					
18X 8X .563/ .719T	53.93	768.2	164.7	2725.6	6.1	3.5	15.5	15.88	18.72	.563	8.00	.719	11.31					
18X 9X .563/ .656T	54.50	771.2	167.8	2760.9	6.2	3.6	16.5	16.03	18.66	.563	9.00	.656	11.28					
16X 6X .563/1.000T	54.84	779.4	168.1	2816.8	6.2	3.6	16.8	16.13	19.00	.563	6.00	1.000	11.47					
18X 7X .563/ .815T	55.25	780.5	170.9	2839.4	6.2	3.6	16.6	16.25	18.88	.563	7.00	.815	11.47					
7X 7X .563/ .719T	56.41	785.7	177.7	2911.4	6.3	3.7	16.4	16.59	18.72	.563	9.00	.719	11.31					

1.3750 - 1 3/8 in.



1.375 IN. PLATE (AREA= 56.72 SQ.IN.)

NOMINAL SIZE	WT./FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X10X .500/ .875	56.95	733.9	184.9	2695.9	6.1	3.7	14.6	16.75	16.88	.500	10.00	.875	9.13
18X10X .563/ .719	58.85	801.5	190.7	3095.7	6.5	3.9	16.2	17.31	18.72	.563	10.00	.719	11.31
18X 8X .563/1.000	61.64	823.0	204.1	3332.2	6.7	4.0	16.3	18.13	19.00	.563	8.00	1.000	11.47
18X11X .563/ .875	67.15	848.1	233.8	3712.8	7.0	4.4	15.9	19.75	18.88	.563	11.00	.875	11.40
18X10X .563/1.000	68.44	856.5	240.1	3821.2	7.1	4.5	15.9	20.13	19.00	.563	10.00	1.000	11.47
18X12X .563/ .875	70.14	860.6	249.4	3917.2	7.1	4.6	15.7	20.63	18.88	.563	12.00	.875	11.40
18X 9X .625/1.125	72.69	860.3	247.4	3939.6	7.1	4.6	15.9	21.38	19.13	.625	9.00	1.125	12.82
21X 9X .688/ .875	75.85	967.5	268.7	4775.2	7.8	4.9	18.3	22.31	21.88	.688	9.00	.875	16.00
21X10X .688/ .875	78.85	984.6	278.9	5053.8	8.0	5.1	18.1	23.19	21.88	.688	10.00	.875	16.00
21X 8X .688/1.125	79.70	994.2	282.5	5171.6	8.0	5.2	18.3	23.44	22.13	.688	8.00	1.125	16.17
21X11X .688/ .875	81.80	1000.1	297.0	5325.1	8.1	5.3	17.9	24.06	21.88	.688	11.00	.875	16.00
21X 9X .688/1.125	83.50	1013.4	305.6	5519.1	8.2	5.4	18.1	24.56	22.13	.688	9.00	1.125	16.17
21X12X .688/ .875	84.80	1014.2	315.1	5590.6	8.3	5.5	17.7	24.94	21.88	.688	12.00	.875	16.88
21X10X .688/1.125	87.35	1030.4	328.6	5856.6	8.4	5.7	17.8	25.69	22.13	.688	10.00	1.125	16.17
21X13X .688/ .875	87.75	1026.9	332.9	5846.6	8.4	5.7	17.6	25.81	21.88	.688	13.00	.875	16.00
24X10X .750/ .875	90.95	1137.1	345.1	6888.7	9.1	6.1	20.4	27.00	25.13	.750	10.00	.875	19.69
24X 8X .750/1.125	91.80	1146.9	345.1	7031.3	9.2	6.1	20.4	27.00	25.13	.750	8.00	1.125	19.88
24X11X .750/ .875	93.94	1153.7	361.3	7224.2	9.3	6.3	20.0	27.63	24.88	.750	11.00	.875	19.69
24X 9X .750/1.125	95.64	1167.7	371.1	7464.5	9.4	6.4	20.1	28.13	25.13	.750	9.00	1.125	19.88
24X12X .750/ .875	96.90	1169.1	381.7	7555.3	9.4	6.5	19.8	28.50	24.88	.750	12.00	.875	19.69
24X10X .750/1.125	99.45	1186.7	397.3	7888.6	9.6	6.6	19.9	29.25	25.13	.750	10.00	1.125	19.88
24X13X .750/ .875	99.89	1183.5	402.4	7884.3	9.6	6.7	19.6	29.38	24.88	.750	13.00	.875	19.69
21X14X .688/1.125	102.65	1083.7	421.1	7128.7	9.1	6.6	16.9	30.19	22.13	.688	14.00	1.125	16.17
21X15X .688/1.125	106.45	1094.1	444.1	7425.3	9.2	6.8	16.7	31.31	22.13	.688	15.00	1.125	16.17
24X12X .750/1.125	107.10	1219.1	449.4	8702.9	9.9	7.1	19.4	31.50	25.13	.750	12.00	1.125	19.88
24X13X .750/1.125	110.94	1233.3	475.6	9098.0	10.1	7.4	19.1	32.63	25.13	.750	13.00	1.125	19.88
27X 9X .875/1.500	126.24	1390.2	539.3	11608.4	11.1	8.3	21.5	37.13	28.50	.875	9.00	1.500	26.14
27X10X .875/1.375	127.09	1391.2	547.0	11682.1	11.1	8.4	21.4	37.38	28.38	.875	10.00	1.375	26.84
27X13X .875/1.125	130.05	1398.0	572.2	11978.8	11.2	8.6	20.9	38.25	28.13	.875	13.00	1.125	25.82
27X10X .875/1.500	131.34	1411.3	577.6	12243.9	11.3	8.7	21.2	38.53	28.50	.875	10.00	1.500	26.14
27X11X .875/1.375	131.75	1410.3	582.2	12262.1	11.3	8.7	21.1	38.75	28.38	.875	11.00	1.375	26.04
27X14X .875/1.125	133.89	1412.6	601.2	12442.8	11.4	8.8	20.7	39.38	28.13	.875	14.00	1.125	25.82
27X15X .875/1.125	137.70	1425.9	629.8	12888.8	11.5	9.0	20.5	40.50	28.13	.875	15.00	1.125	25.82
27X13X .875/1.500	146.64	1463.0	692.5	14041.6	11.9	9.6	20.3	43.13	28.50	.875	13.00	1.500	26.14
30X10X1.000/1.375	148.75	1560.2	653.1	15080.4	12.3	9.7	23.1	43.75	31.38	1.000	10.00	1.375	32.76
30X10X1.000/1.500	153.00	1582.1	686.7	15742.2	12.4	10.0	22.9	45.00	31.50	1.000	10.00	1.500	32.88
30X11X1.000/1.375	153.44	1581.2	691.8	15764.0	12.4	10.0	22.8	45.13	31.38	1.000	11.00	1.375	32.76
30X10X1.000/1.750	161.50	1622.3	753.3	17040.1	12.8	10.5	22.6	47.50	31.75	1.000	10.00	1.750	33.13

1.3750 - 1 3/8 in.

1.500 IN. PLATE (AREA= 67.50 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	YF	AREA	DEPTH	DIMENSIONS		SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	WEB THICK						FLANGE THICK			
3X 2X .125/ .188T	2.55	26.0	5.2	20.4	.5	.8	3.9	.75	3.19	.125	2.00	.188	.59
4X 2X .125/ .188T	2.99	32.4	5.3	25.8	.6	.8	4.9	.88	4.19	.125	2.00	.188	.71
3X 2X .188/ .250T	3.60	29.1	5.9	23.2	.6	.8	4.0	1.06	3.25	.188	2.00	.250	.89
3X 2X .188/ .313T	4.05	31.4	6.3	25.2	.6	.8	4.0	1.19	3.31	.188	2.00	.313	.90
3X 3X .188/ .250T	4.45	33.3	6.8	27.0	.6	.8	3.9	1.31	3.25	.188	3.00	.250	.89
4X 2X .188/ .313T	4.69	41.3	6.8	34.1	.7	.8	5.0	1.38	4.31	.188	2.00	.313	1.09
5X 2X .188/ .250T	4.90	49.3	7.0	41.3	.8	.8	5.9	1.44	5.25	.188	2.00	.250	1.27
5X 2X .188/ .313T	5.30	53.8	7.6	45.6	.8	.8	6.0	1.56	5.31	.188	2.00	.313	1.28
6X 2X .188/ .250T	5.95	69.5	8.7	60.7	.9	.9	6.9	1.75	6.31	.188	2.00	.313	1.47
6X 3X .188/ .250T	6.39	74.7	9.6	66.2	1.0	.9	6.9	1.88	6.25	.188	3.00	.250	1.46
4X 4X .188/ .313T	6.80	55.9	9.8	48.5	.8	.9	4.9	2.00	4.31	.188	4.00	.313	1.09
6X 3X .188/ .313T	7.00	82.8	10.8	74.8	1.0	.9	6.9	2.06	6.31	.188	3.00	.313	1.47
5X 4X .188/ .313T	7.45	74.0	11.3	66.6	1.0	.9	5.9	2.19	5.31	.188	4.00	.313	1.28
6X 4X .188/ .313T	8.09	95.5	13.0	89.2	1.1	.9	6.9	2.38	6.31	.188	4.00	.313	1.47
5X 3X .250/ .438T	8.70	79.6	12.2	73.2	1.0	.9	6.0	2.56	5.44	.250	3.00	.438	1.74
7X 3X .250/ .313T	9.15	111.3	13.6	107.1	1.2	1.0	7.8	2.69	7.31	.250	3.00	.313	2.28
6X 3X .250/ .438T	9.55	102.9	14.2	98.8	1.2	1.0	7.0	2.81	6.44	.250	3.00	.438	1.99
7X 3X .250/ .375T	9.79	120.7	15.0	118.6	1.3	1.0	7.9	2.88	7.38	.250	3.00	.375	2.22
8X 3X .250/ .313T	10.00	138.0	15.7	138.5	1.4	1.0	8.8	2.94	8.31	.250	3.00	.313	2.45
7X 4X .250/ .313T	10.20	125.7	16.0	125.2	1.3	1.0	7.8	3.00	7.31	.250	4.00	.313	2.28
7X 3X .250/ .438T	10.40	129.6	16.4	130.0	1.4	1.0	7.9	3.06	7.44	.250	3.00	.438	2.24
8X 3X .250/ .375T	10.64	149.1	17.3	153.2	1.5	1.0	8.9	3.13	8.38	.250	3.00	.375	2.47
8X 4X .250/ .313T	11.05	155.2	18.4	161.7	1.5	1.0	8.8	3.25	8.31	.250	4.00	.313	2.45
8X 3X .250/ .438T	11.25	159.5	18.8	167.5	1.5	1.1	8.9	3.31	8.44	.250	3.00	.438	2.49
6X 5X .250/ .375T	11.49	122.1	18.0	123.7	1.3	1.0	6.9	3.38	6.38	.250	5.00	.375	1.97
8X 4X .250/ .375T	11.90	168.5	20.5	180.7	1.6	1.1	8.8	3.50	8.38	.250	4.00	.375	2.47
7X 5X .250/ .375T	12.34	153.0	20.8	162.9	1.5	1.1	7.8	3.63	7.38	.250	5.00	.375	2.22
6X 5X .250/ .438T	12.55	132.8	20.1	138.5	1.4	1.0	6.9	3.69	6.44	.250	5.00	.438	1.99
8X 4X .250/ .438T	12.75	181.6	22.7	200.4	1.7	1.1	8.8	3.75	8.44	.250	4.00	.438	2.49
7X 5X .250/ .438T	13.19	186.9	23.9	209.0	1.7	1.1	8.8	3.88	8.38	.250	5.00	.438	2.47
6X 6X .250/ .438T	14.04	145.7	23.0	158.0	1.5	1.1	6.9	4.13	6.44	.250	6.00	.438	1.99
8X 5X .250/ .438T	14.25	201.1	26.5	232.5	1.8	1.2	8.8	4.19	8.44	.250	5.00	.438	2.49
9X 4X .313/ .375T	14.65	210.6	25.2	244.9	1.8	1.2	9.7	4.31	9.38	.313	4.00	.375	3.41
7X 6X .250/ .438T	14.89	180.9	26.6	207.1	1.7	1.1	7.8	4.38	7.44	.250	6.00	.438	2.24
9X 4X .313/ .438T	15.50	224.4	27.6	268.6	1.9	1.2	9.7	4.56	9.44	.313	4.00	.438	3.42
10X 4X .313/ .375T	15.74	248.7	28.6	305.1	2.1	1.2	10.7	4.63	10.38	.313	4.00	.375	3.72
8X 6X .250/ .438T	15.74	218.9	30.3	264.4	1.9	1.2	8.7	4.63	8.44	.250	6.00	.438	2.49
9X 5X .313/ .375T	15.95	230.2	28.9	279.3	2.0	1.2	9.7	4.69	9.38	.313	5.00	.375	3.41
9X 4X .313/ .500T	16.35	237.4	29.9	292.1	2.0	1.2	9.8	4.81	9.50	.313	4.00	.500	3.44
10X 4X .313/ .438T	16.59	263.9	31.2	333.5	2.1	1.3	10.7	4.88	10.44	.313	4.00	.438	3.74
10X 5X .313/ .375T	17.00	270.3	32.7	346.3	2.2	1.3	10.6	5.00	10.38	.313	5.00	.375	3.72
9X 4X .313/ .563T	17.20	250.4	32.3	316.6	2.1	1.3	9.8	5.06	9.56	.313	4.00	.563	3.46
10X 4X .313/ .500T	17.44	278.6	33.9	362.4	2.2	1.3	10.7	5.13	10.50	.313	4.00	.500	3.76
10X 5X .313/ .438T	18.05	287.3	35.9	381.0	2.3	1.3	10.6	5.31	10.44	.313	5.00	.438	3.74

1.5000 - 1 1/2 in.



1.500 IN. PLATE (AREA= 67.50 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YP	VF	AREA	DEPTH	WEB THICK	DIMENSIONS		FLANGE THICK	SHEAR AREA
WT/FT	ZPL	ZFL	WT/FT	ZFL	WIDTH										
10X 4X .563T	18.29	292.3	36.5	391.0	2.3	1.3	10.7	5.38	10.56	.313	4.00	.563	3.77		
9X 6X .313/ .438T	18.50	264.9	36.1	347.4	2.2	1.3	9.6	5.44	9.44	.313	6.00	.438	3.42		
10X 5X .313/ .500T	19.14	303.4	39.2	416.3	2.4	1.4	10.6	5.63	10.50	.313	5.00	.500	3.76		
7X 7X .313/ .500T	19.35	211.4	34.4	266.4	1.9	1.3	7.7	5.69	7.50	.313	7.00	.500	2.82		
10X 6X .313/ .438T	19.55	308.2	40.5	427.8	2.4	1.4	10.6	5.75	10.44	.313	6.00	.438	3.74		
9X 6X .313/ .500T	19.75	280.6	39.6	381.6	2.3	1.4	10.6	5.81	9.50	.313	6.00	.500	3.44		
10X 5X .313/ .563T	20.20	310.7	42.4	451.6	2.5	1.4	10.6	5.94	10.56	.313	5.00	.563	3.77		
7X 7X .313/ .563T	20.84	224.0	37.7	292.5	2.0	1.3	7.8	6.13	7.56	.313	7.00	.563	2.84		
10X 6X .313/ .500T	20.84	325.8	44.5	470.0	2.5	1.4	10.6	6.13	10.50	.313	6.00	.500	3.76		
9X 7X .313/ .500T	21.45	298.6	44.4	425.2	2.4	1.4	9.6	6.31	9.50	.313	7.00	.500	3.44		
12X 4X .375/ .469T	21.69	367.1	43.9	547.3	2.7	1.5	12.5	6.38	12.47	.375	4.00	.469	5.24		
8X 7X .313/ .563T	21.90	268.3	43.1	373.5	2.2	1.4	8.7	6.44	8.56	.313	7.00	.563	3.15		
10X 6X .313/ .563T	22.10	341.9	48.4	511.4	2.6	1.5	10.6	6.50	10.56	.313	6.00	.563	3.77		
10X 7X .313/ .500T	22.54	345.6	49.8	522.5	2.7	1.5	10.5	6.63	10.50	.313	7.00	.500	3.76		
12X 4X .375/ .531T	22.54	382.5	46.9	586.6	2.8	1.5	12.5	6.63	12.53	.375	4.00	.531	5.26		
12X 5X .375/ .491T	23.26	393.8	49.8	617.4	2.9	1.6	12.4	6.84	12.47	.375	5.00	.469	5.24		
12X 4X .375/ .594T	23.39	397.4	50.0	626.3	2.9	1.6	12.5	6.88	12.59	.375	4.00	.594	5.28		
7X 7X .375/ .625T	23.80	237.5	42.0	326.1	2.1	1.4	7.8	7.06	7.63	.375	7.00	.625	3.42		
10X 7X .313/ .563T	24.00	362.4	54.4	570.0	2.8	1.6	10.5	7.06	10.56	.313	7.00	.563	3.77		
12X 4X .375/ .656T	24.24	411.0	53.0	664.8	3.0	1.6	12.5	7.13	12.66	.375	4.00	.656	5.31		
12X 5X .375/ .531T	24.34	410.9	53.7	666.0	3.0	1.6	12.4	7.16	12.53	.375	5.00	.531	5.26		
9X 8X .313/ .563T	24.85	331.4	54.0	513.8	2.6	1.6	9.5	7.31	9.56	.313	8.00	.563	3.46		
12X 6X .375/ .469T	24.85	417.4	55.7	686.2	3.0	1.6	12.3	7.31	12.47	.375	6.00	.469	5.24		
12X 5X .375/ .594T	25.40	426.6	57.4	713.1	3.1	1.7	12.4	7.47	12.59	.375	5.00	.594	5.28		
10X 8X .313/ .563T	25.94	381.4	60.5	629.6	2.9	1.7	10.4	7.63	10.56	.313	8.00	.563	3.77		
12X 6X .375/ .531T	26.15	435.7	60.3	743.5	3.1	1.7	12.3	7.69	12.53	.375	6.00	.531	5.26		
12X 5X .375/ .656T	26.45	442.0	61.3	761.8	3.2	1.7	12.4	7.78	12.66	.375	5.00	.656	5.31		
7X 7X .375/ .469T	26.45	438.7	61.6	754.2	3.2	1.7	12.3	7.78	12.47	.375	7.00	.469	5.24		
26.79	26.79	250.2	46.5	360.3	2.2	1.4	7.8	7.88	7.69	.438	7.00	.688	4.03		
27.40	27.40	452.6	64.9	798.5	3.3	1.8	12.3	8.06	12.59	.375	6.00	.594	5.28		
27.95	27.95	458.1	67.0	820.6	3.3	1.8	12.2	8.22	12.53	.375	7.00	.531	5.26		
28.25	28.25	260.4	49.8	386.6	2.3	1.5	7.8	8.31	7.75	.438	7.00	.758	4.05		
28.70	28.70	468.6	69.5	856.7	3.4	1.8	12.3	8.44	12.66	.375	6.00	.656	5.31		
29.44	29.44	475.6	72.4	885.1	3.4	1.9	12.2	8.66	12.59	.375	7.00	.594	5.28		
29.95	29.95	516.9	69.3	979.7	3.6	1.9	14.1	8.78	14.53	.438	5.00	.531	7.02		
30.91	30.91	533.4	73.7	1041.3	3.7	2.0	14.1	9.09	14.59	.438	5.00	.594	7.05		
30.91	30.91	492.5	77.8	951.0	3.5	1.9	12.2	9.09	12.66	.375	7.00	.656	5.31		
31.45	31.45	496.1	79.8	968.7	3.6	2.0	12.1	9.25	12.59	.375	8.00	.594	5.28		
31.65	31.65	543.1	77.0	1081.4	3.8	2.0	14.0	9.31	14.53	.438	6.00	.531	7.02		
31.99	31.99	549.6	78.1	1105.4	3.8	2.0	14.1	9.41	14.66	.438	5.00	.656	7.08		
32.74	32.74	280.4	57.4	447.0	2.4	1.6	7.8	9.63	7.88	.500	7.00	.875	4.69		
32.95	32.95	560.6	82.3	1154.6	3.9	2.1	14.0	9.69	14.59	.438	6.00	.594	7.05		
33.05	33.05	564.3	82.5	1167.0	3.9	2.1	14.2	9.72	14.72	.438	5.00	.719	7.10		
33.15	33.15	513.3	86.0	1043.3	3.7	2.0	12.1	9.75	12.66	.375	8.00	.656	5.31		
33.80	33.80	281.9	57.4	452.7	2.4	1.6	7.9	9.94	8.00	.563	6.00	1.000	5.35		

1.500 IN. PLATE (AREA= 67.50 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		WT/FT	ZPL	ZFL						WEB THICK	FLANGE WIDTH	FLANGE THICK	
14X 6X .438/ .656T		34.20	577.7	87.6	1229.0	4.0	2.1	14.0	10.06	.438	6.00	.656	7.08
14X 7X .438/ .594T		34.95	585.0	90.9	1266.1	4.0	2.2	13.9	10.28	.438	7.00	.594	7.05
12X 9X .375/ .656T		35.39	531.7	94.2	1133.4	3.8	2.1	12.0	10.41	.375	9.00	.656	5.31
14X 6X .438/ .719T		35.50	593.4	92.9	1302.6	4.1	2.2	14.0	10.44	.438	6.00	.719	7.10
14X 7X .438/ .656T		36.45	602.4	97.1	1350.9	4.2	2.2	13.9	10.72	.438	7.00	.656	7.08
14X 8X .438/ .594T		36.99	606.8	99.6	1376.7	4.2	2.3	13.8	10.88	.438	8.00	.594	7.05
7X 7X .563/1.000T		37.20	297.8	64.9	506.3	2.5	1.7	7.8	10.94	.563	7.00	1.000	5.35
16X 5X .500/ .594T		37.30	644.4	93.3	1474.3	4.3	2.3	15.8	10.97	.500	5.00	.594	9.05
14X 7X .438/ .719T		37.94	618.9	103.3	1436.1	4.3	2.3	13.9	11.16	.438	7.00	.719	7.10
16X 5X .500/ .656T		38.35	660.1	98.1	1550.7	4.4	2.3	15.8	11.28	.500	5.00	.656	9.08
14X 8X .438/ .656T		38.69	624.4	106.6	1471.0	4.3	2.4	13.8	11.38	.438	8.00	.656	7.08
16X 6X .500/ .594T		39.30	672.1	103.0	1615.7	4.5	2.4	15.7	11.56	.500	6.00	.594	9.05
16X 5X .500/ .719T		39.41	675.3	103.0	1628.8	4.5	2.4	15.8	11.59	.500	5.00	.719	9.11
12X 9X .438/ .719T		39.85	548.7	104.1	1244.4	4.0	2.3	12.0	11.72	.438	9.00	.719	6.23
14X 8X .438/ .719T		40.39	641.0	113.6	1565.8	4.4	2.4	13.8	11.88	.438	8.00	.719	7.10
16X 6X .500/ .656T		40.60	689.2	108.9	1708.2	4.6	2.5	15.7	11.94	.500	6.00	.656	9.08
16X 7X .500/ .594T		41.34	697.0	112.8	1755.8	4.7	2.5	15.6	12.16	.500	7.00	.594	9.05
7X 7X .625/1.125T		41.65	313.6	72.3	565.7	2.7	1.8	7.8	12.25	.625	7.00	1.125	6.02
16X 6X .500/ .719T		41.85	705.3	114.9	1799.7	4.7	2.6	15.7	12.31	.500	6.00	.719	9.11
16X 5X .500/ .875T		42.09	710.4	115.4	1824.4	4.8	2.6	15.8	12.38	.500	5.00	.875	9.19
12X10X .438/ .719T		42.30	565.2	113.2	1341.3	4.1	2.4	11.8	12.44	.438	10.00	.719	6.23
16X 7X .500/ .656T		42.81	714.8	119.6	1698.8	4.8	2.6	15.6	12.59	.500	7.00	.656	9.08
14X 9X .438/ .719T		42.81	661.1	124.0	1694.0	4.6	2.6	13.7	12.59	.438	9.00	.719	7.10
16X 7X .500/ .719T		44.30	731.6	126.6	1966.8	4.9	2.7	15.5	13.03	.500	7.00	.719	9.11
16X 6X .500/ .875T		45.05	741.9	129.6	2020.3	5.0	2.7	15.6	13.25	.500	6.00	.875	9.19
16X 8X .500/ .656T		45.05	737.6	130.3	2011.6	5.0	2.7	15.4	13.25	.500	8.00	.656	9.08
14X10X .438/ .719T		45.25	678.7	134.4	1819.3	4.7	2.7	13.5	13.31	.438	10.00	.719	7.10
7X 7X .688/1.250T		46.10	328.1	79.7	625.4	2.8	1.9	7.8	13.56	.688	7.00	1.250	6.71
16X 8X .500/ .719T		46.75	755.0	138.4	2131.5	5.1	2.8	15.4	13.75	.500	8.00	.719	9.11
16X 9X .500/ .656T		47.29	758.4	141.2	2161.3	5.2	2.8	15.3	13.91	.500	9.00	.656	9.08
18X 6X .563/ .656T		47.80	802.1	133.7	2310.5	5.3	2.9	17.3	14.06	.563	6.00	.656	11.35
16X 7X .500/ .875T		48.04	769.5	144.0	2230.1	5.2	2.9	15.5	14.13	.500	7.00	.875	9.19
18X 6X .563/ .719T		49.10	818.7	140.5	2424.7	5.4	3.0	17.3	14.44	.563	6.00	.719	11.38
16X 9X .500/ .719T		49.20	775.8	150.2	2292.4	5.3	3.0	15.3	14.47	.500	9.00	.719	9.11
16X 8X .500/ .875T		51.00	793.5	158.3	2425.9	5.4	3.1	15.3	15.00	.500	8.00	.875	9.19
18X 7X .563/ .719T		51.54	845.4	153.6	2628.0	5.6	3.1	17.1	15.16	.563	7.00	.719	11.38
16X10X .500/ .719T		51.65	794.7	162.0	2451.3	5.4	3.1	15.1	15.19	.500	10.00	.719	9.11
18X 8X .563/ .656T		52.29	851.9	157.8	2684.4	5.7	3.2	17.0	15.38	.563	8.00	.656	11.35
14X10X .500/ .875T		53.55	715.6	160.3	2145.0	5.1	3.0	13.4	15.75	.500	10.00	.875	8.19
16X 9X .500/ .875T		53.99	814.7	172.7	2618.9	5.6	3.2	15.2	15.86	.500	9.00	.875	9.19
18X 8X .563/ .719T		53.99	869.2	166.6	2827.2	5.8	3.3	17.0	15.88	.563	8.00	.719	11.38
18X 9X .563/ .656T		54.50	873.0	169.7	2864.5	5.9	3.3	16.9	16.03	.563	9.00	.656	11.35
18X 6X .563/1.000T		54.84	882.6	170.0	2922.6	5.9	3.3	17.2	16.13	.563	6.00	1.000	11.54
18X 7X .563/ .875T		55.25	884.2	172.8	2946.6	5.9	3.3	17.0	16.25	.563	7.00	.875	11.47
18X 9X .563/ .719T		56.41	890.9	179.7	3023.3	6.0	3.4	16.8	16.59	.563	9.00	.719	11.38

1.5000 - 1 1/2 in.



1.500 IN. PLATE (AREA= 67.50 SQ.IN.)

NOMINAL SIZE	SECTION			MODULUS	INERTIA	R	VP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL								THICK	WEB	WIDTH	
16X10X .500/.375T	56.95	833.4	186.9	2805.5	5.8	3.4	15.0	15.75	16.88	.500	10.00	.875	9.19	
18X10X .563/.719T	58.85	910.5	192.8	3217.8	6.2	3.5	16.7	17.31	18.72	.563	10.00	.719	11.38	
18X 8X .563/1.000T	61.64	936.7	206.4	3467.2	6.4	3.7	16.8	18.13	19.00	.563	8.00	1.000	11.54	
18X11X .563/.875T	67.15	968.5	236.4	3872.5	6.7	4.0	16.4	19.75	18.88	.563	11.00	.875	11.47	
18X10X .563/1.000T	68.44	978.8	242.8	3987.6	6.7	4.1	16.4	20.13	19.00	.563	10.00	1.000	11.54	
18X12X .563/.875T	70.14	984.3	252.1	4090.8	6.8	4.2	16.2	20.63	18.88	.563	12.00	.875	11.47	
18X 9X .625/1.125T	72.69	983.5	250.3	4115.8	6.8	4.2	16.4	21.38	19.13	.625	9.00	1.125	12.89	
21X 9X .688/.875T	75.85	1106.2	263.9	4981.7	7.4	4.5	18.9	22.31	21.88	.688	9.00	.875	16.09	
21X10X .688/.875T	78.85	1127.2	282.3	5278.4	7.6	4.7	18.7	23.19	21.88	.688	10.00	.875	16.09	
21X 8X .688/1.125T	79.70	1136.5	286.1	5402.6	7.7	4.7	18.9	23.44	22.13	.688	8.00	1.125	16.26	
21X11X .688/.875T	81.80	1146.3	300.6	5567.9	7.8	4.9	18.5	24.06	21.88	.688	11.00	.875	16.09	
21X 9X .688/1.125T	83.50	1162.2	309.4	5773.8	7.9	5.0	18.7	24.56	22.13	.688	9.00	1.125	16.26	
21X12X .688/.875T	84.80	1163.7	318.9	5852.0	8.0	5.0	18.4	24.94	21.88	.688	12.00	.875	16.09	
21X10X .688/1.125T	87.35	1183.2	332.7	6135.6	8.1	5.2	18.4	25.69	22.13	.688	10.00	1.125	16.26	
21X13X .688/.875T	87.75	1179.3	336.9	6126.7	8.1	5.2	18.2	25.81	21.88	.688	13.00	.875	16.09	
24X10X .750/.875T	90.95	1304.9	345.6	7208.0	8.7	5.5	20.9	26.75	24.88	.750	10.00	.875	19.79	
24X 8X .750/1.125T	91.80	1316.4	349.8	7358.8	8.8	5.6	21.0	27.00	25.13	.750	8.00	1.125	19.97	
24X11X .750/.875T	93.94	1325.0	366.1	7566.8	8.9	5.7	20.7	27.63	24.88	.750	11.00	.875	19.79	
24X 9X .750/1.125T	95.64	1341.7	376.1	7822.3	9.0	5.8	20.8	28.13	25.13	.750	9.00	1.125	19.97	
24X12X .750/.875T	96.90	1343.8	386.7	7921.5	9.1	5.9	20.5	28.50	24.88	.750	12.00	.875	19.79	
24X10X .750/1.125T	99.45	1364.8	402.5	8277.4	9.2	6.1	20.6	29.25	25.13	.750	10.00	1.125	19.97	
24X13X .750/.875T	99.89	1361.4	407.6	8274.9	9.2	6.1	20.3	29.38	24.88	.750	13.00	.875	19.79	
21X14X .688/1.125T	102.65	1249.5	426.2	7509.5	8.8	6.0	17.6	30.19	22.13	.688	14.00	1.125	16.26	
21X15X .688/1.125T	106.45	1262.6	449.4	7832.3	8.9	6.2	17.4	31.31	22.13	.688	15.00	1.125	16.26	
24X12X .750/1.125T	107.10	1404.4	455.2	9153.1	9.6	6.5	20.1	31.50	25.13	.750	12.00	1.125	19.97	
24X13X .750/1.125T	110.94	1421.8	481.8	9582.7	9.8	6.7	19.9	32.63	25.13	.750	13.00	1.125	19.97	
27X 9X .875/1.500T	126.24	1600.8	547.4	12238.0	10.8	7.6	22.4	37.13	28.50	.875	9.00	1.500	26.25	
27X10X .875/1.375T	127.09	1602.1	555.1	12319.2	10.8	7.7	22.2	37.38	28.38	.875	10.00	1.375	26.15	
27X13X .875/1.125T	130.05	1610.6	580.5	12643.7	10.9	7.9	21.8	38.25	28.13	.875	13.00	1.125	25.93	
27X10X .875/1.500T	131.34	1626.0	586.2	12926.4	11.0	7.9	22.1	38.63	28.50	.875	10.00	1.500	26.25	
27X11X .875/1.375T	131.75	1625.1	590.9	12947.7	11.0	8.0	21.9	38.75	28.38	.875	11.00	1.375	26.15	
27X14X .875/1.125T	133.89	1628.2	609.9	13147.5	11.1	8.1	21.6	39.38	28.13	.875	14.00	1.125	25.93	
27X15X .875/1.125T	137.70	1644.3	638.9	13632.9	11.2	8.3	21.3	40.50	28.13	.875	15.00	1.125	25.93	
27X13X .875/1.500T	146.64	1688.5	702.7	14885.8	11.6	8.8	21.2	43.13	28.50	.875	13.00	1.500	26.25	
30X10X1.000/1.375T	148.75	1794.2	664.1	15937.4	12.0	8.9	24.0	43.75	31.38	1.000	10.00	1.375	32.88	
30X10X1.000/1.500T	153.00	1820.0	698.2	16653.1	12.2	9.2	23.9	45.00	31.50	1.000	10.00	1.500	33.00	
30X11X1.000/1.375T	153.44	1819.1	703.4	16678.6	12.2	9.2	23.7	45.13	31.38	1.000	11.00	1.375	32.88	
30X10X1.000/1.750T	161.50	1867.3	766.0	18068.5	12.5	9.7	23.6	47.50	31.75	1.000	10.00	1.750	33.25	

1.5000 - 1 1/2 in.

AD-A048 989

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 11/6  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HIGH-STRENGTH STEELS --ETC(U)  
DEC 77 S F ZEMANEK, N S NAPPI

UNCLASSIFIED

DTNSRDC-77-0069

NL

4 OF 5

AD  
A048989

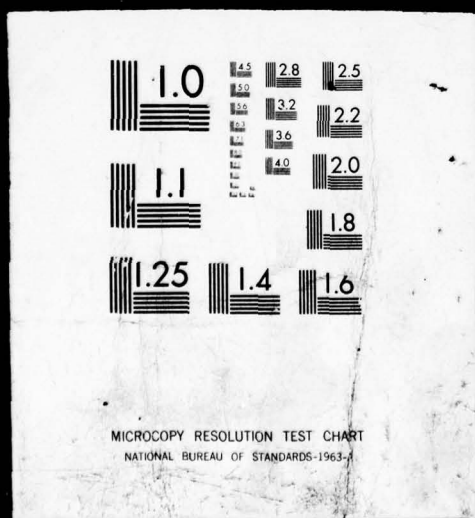




4 OF 5

AD

A048989



1.750 IN. PLATE (AREA= 91.00 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS				R	VP	VF	AREA	DEPTH	DIMENSIONS		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	WEB THICK	FLANGE THICK								
3X 2X .125/ .180T	2.55	35.2	7.9	31.7	.6	.9	4.0	.75	3.19	.125	2.00	.188	.62
4X 2X .125/ .180T	2.99	41.1	7.5	37.5	.6	.9	5.0	.88	4.19	.125	2.00	.188	.74
3X 2X .188/ .250T	3.60	38.3	8.5	34.8	.6	.9	4.1	1.06	3.25	.188	2.00	.250	.94
3X 2X .188/ .313T	4.05	40.4	8.9	37.0	.6	.9	4.1	1.19	3.31	.188	2.00	.313	.95
3X 3X .188/ .250T	4.45	42.2	9.5	38.9	.6	.9	4.1	1.31	3.25	.188	3.00	.250	.94
4X 2X .188/ .313T	4.69	49.6	9.0	46.3	.7	.9	5.1	1.38	4.31	.188	2.00	.313	1.14
5X 2X .188/ .250T	4.90	57.0	8.9	53.7	.8	.9	6.1	1.44	5.25	.188	2.00	.250	1.32
5X 2X .188/ .313T	5.30	61.3	9.5	58.2	.8	.9	6.1	1.56	5.31	.188	2.00	.313	1.33
6X 3X .188/ .250T	5.95	76.3	10.4	73.9	.9	1.0	7.1	1.75	6.31	.188	3.00	.313	1.52
6X 3X .188/ .313T	6.39	81.4	11.3	79.6	.9	1.0	7.0	1.88	6.25	.188	3.00	.250	1.50
4X 4X .188/ .313T	6.80	63.8	12.1	61.6	.8	1.0	5.1	2.00	4.31	.188	4.00	.313	1.14
6X 3X .188/ .313T	7.00	89.4	12.5	88.7	1.0	1.0	7.1	2.06	6.31	.188	3.00	.313	1.52
5X 4X .188/ .313T	7.45	81.3	13.2	80.4	.9	1.0	6.1	2.19	5.31	.188	4.00	.313	1.33
6X 4X .188/ .313T	8.09	102.3	14.7	103.6	1.0	1.0	7.0	2.38	6.31	.188	4.00	.313	1.52
5X 3X .250/ .438T	9.70	87.0	14.1	87.4	1.0	1.0	6.2	2.56	5.44	.250	3.00	.438	1.80
7X 3X .250/ .313T	9.15	118.1	15.2	122.3	1.1	1.0	8.0	2.69	7.31	.250	3.00	.313	2.27
6X 3X .250/ .438T	9.55	110.2	15.9	114.0	1.1	1.0	7.2	2.81	6.44	.250	3.00	.438	2.05
7X 3X .250/ .375T	9.79	127.8	16.6	134.4	1.2	1.1	8.1	2.88	7.38	.250	3.00	.375	2.28
8X 3X .250/ .313T	10.00	145.1	17.2	154.8	1.3	1.1	9.0	2.94	8.31	.250	3.00	.313	2.52
7X 4X .250/ .313T	10.20	133.1	17.7	141.3	1.2	1.1	8.0	3.00	7.31	.250	4.00	.313	2.27
7X 3X .250/ .438T	10.40	137.1	18.0	146.3	1.2	1.1	6.1	3.06	7.44	.250	3.00	.438	2.30
8X 3X .250/ .375T	10.64	156.8	18.8	178.1	1.3	1.1	9.0	3.13	8.38	.250	3.00	.375	2.53
8X 4X .250/ .313T	11.05	163.3	20.0	179.1	1.4	1.1	9.0	3.25	8.31	.250	4.00	.313	2.52
8X 3X .250/ .438T	11.25	167.9	20.4	185.1	1.4	1.1	9.1	3.31	8.44	.250	3.00	.438	2.55
6X 5X .250/ .375T	11.49	130.5	19.9	148.3	1.2	1.1	7.1	3.38	6.38	.250	5.00	.375	2.03
8X 4X .250/ .375T	11.90	177.7	22.1	198.9	1.4	1.1	9.0	3.50	8.38	.250	4.00	.375	2.53
7X 5X .250/ .375T	12.34	162.4	22.6	180.9	1.4	1.1	8.0	3.63	7.38	.250	5.00	.375	2.28
6X 5X .250/ .438T	12.55	142.0	22.0	156.0	1.3	1.1	7.1	3.69	6.44	.250	5.00	.438	2.05
8X 4X .250/ .438T	12.75	192.0	24.3	219.6	1.5	1.1	9.0	3.75	8.44	.250	4.00	.438	2.55
8X 5X .250/ .375T	13.19	198.0	25.5	228.6	1.5	1.2	9.0	3.88	8.38	.250	5.00	.375	2.53
7X 5X .250/ .438T	13.40	176.3	25.0	201.4	1.4	1.1	8.0	3.94	7.44	.250	6.00	.438	2.30
6X 6X .250/ .438T	14.04	156.3	25.0	176.6	1.4	1.1	7.1	4.13	6.44	.250	5.00	.438	2.05
8X 5X .250/ .438T	14.25	214.0	28.1	253.3	1.6	1.2	9.0	4.19	8.44	.250	5.00	.438	2.55
9X 4X .313/ .375T	14.65	223.7	26.8	266.0	1.7	1.2	9.9	4.31	9.38	.313	4.00	.375	3.48
7X 6X .250/ .438T	14.89	193.6	28.4	227.5	1.5	1.2	6.0	4.36	7.44	.250	6.00	.438	2.30
9X 4X .313/ .438T	15.50	239.3	29.1	290.7	1.7	1.2	10.0	4.56	9.44	.313	4.00	.438	3.50
10X 4X .313/ .375T	15.74	265.3	30.1	328.3	1.8	1.2	10.9	4.63	10.38	.313	4.00	.375	3.80
8X 6X .250/ .438T	15.74	234.6	32.0	287.0	1.7	1.2	9.0	4.63	8.44	.250	6.00	.438	2.55
9X 5X .313/ .375T	15.95	246.1	30.5	302.0	1.8	1.2	9.9	4.69	9.38	.313	5.00	.375	3.48
9X 4X .313/ .500T	16.35	254.3	31.5	315.4	1.8	1.2	10.0	4.81	9.50	.313	4.00	.500	3.52
10X 4X .313/ .438T	16.59	282.9	32.8	358.0	1.9	1.3	10.9	4.88	10.44	.313	4.00	.438	3.82
10X 5X .313/ .375T	17.00	290.4	34.2	371.4	2.0	1.3	10.9	5.00	10.38	.313	5.00	.375	3.80
9X 4X .313/ .563T	17.20	269.3	34.0	341.2	1.9	1.3	10.0	5.06	9.56	.313	4.00	.563	3.54
10X 4X .313/ .500T	17.44	300.1	35.4	388.3	2.0	1.3	11.0	5.13	10.50	.313	4.00	.500	3.83
10X 5X .313/ .438T	18.05	310.5	37.5	407.8	2.0	1.3	10.9	5.31	10.44	.313	5.00	.438	3.82

1.7500 - 1 3/4 in.



1.750 IN. PLATE (AREA= 91.88 SQ.IN.)

SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WEB	FLANGE	THICK	AREA
10X 4X .313/.563T	18.29	316.3	38.1	418.3	2.1	1.3	11.0	5.38	10.56	.313		4.00	.563	3.85
9X 6X .313/.538T	18.50	286.8	37.8	373.7	2.0	1.3	9.9	5.44	9.44	.313		4.00	.438	3.50
10X 5X .313/.500T	19.14	329.9	40.8	445.0	2.1	1.3	10.9	5.63	10.50	.313		5.00	.500	3.83
7X 7X .313/.500T	19.35	229.9	36.4	290.8	1.7	1.3	8.0	5.69	7.50	.313		7.00	.500	2.90
10X 6X .313/.538T	19.55	335.8	42.2	457.1	2.2	1.4	10.8	5.75	10.44	.313		6.00	.438	3.82
9X 6X .313/.500T	19.75	305.8	41.4	409.8	2.0	1.3	9.9	5.81	9.50	.313		6.00	.500	3.52
10X 5X .313/.563T	20.20	348.5	44.1	482.2	2.2	1.4	10.9	5.94	10.56	.313		7.00	.563	3.85
7X 7X .313/.500T	20.84	245.0	39.8	318.7	1.8	1.3	8.0	6.13	7.56	.313		7.00	.563	2.91
10X 6X .313/.500T	20.84	357.5	46.2	501.6	2.3	1.4	10.8	6.13	10.50	.313		6.00	.500	3.83
9X 7X .313/.500T	21.45	328.2	46.2	456.0	2.2	1.4	9.9	6.31	9.50	.313		7.00	.500	3.52
12X 4X .375/.669T	21.69	403.4	45.5	581.0	2.4	1.4	12.8	6.38	12.47	.375		4.00	.469	5.33
8X 7X .313/.563T	21.90	295.0	45.1	403.0	2.0	1.4	8.9	6.44	8.56	.313		7.00	.563	3.23
10X 6X .313/.563T	22.10	377.6	50.2	565.4	2.4	1.4	10.9	6.50	10.56	.313		6.00	.563	3.85
10X 7X .313/.500T	22.54	382.5	51.6	557.2	2.4	1.5	10.8	6.63	10.50	.313		7.00	.500	3.83
12X 4X .375/.531T	22.54	422.5	48.6	622.3	2.5	1.5	12.8	6.63	12.53	.375		4.00	.531	5.36
12X 5X .375/.469T	23.26	436.6	51.5	654.7	2.6	1.5	12.7	6.84	12.47	.375		5.00	.469	5.33
12X 4X .375/.594T	23.39	440.9	51.7	664.0	2.6	1.5	12.8	6.88	12.59	.375		4.00	.594	5.38
7X 7X .375/.625T	23.80	262.3	44.2	354.9	1.9	1.4	8.0	7.00	7.63	.375		7.00	.625	3.52
10X 7X .313/.563T	24.00	404.0	56.2	607.6	2.5	1.5	10.8	7.06	10.56	.313		7.00	.563	3.85
12X 4X .375/.531T	24.24	458.1	54.7	704.6	2.7	1.5	12.9	7.13	12.66	.375		4.00	.531	5.36
12X 5X .375/.531T	24.34	450.2	55.4	705.9	2.7	1.5	12.7	7.16	12.53	.375		5.00	.531	5.36
9X 8X .313/.563T	24.85	369.9	56.0	550.3	2.4	1.5	9.8	7.31	9.56	.313		8.00	.563	3.54
12X 4X .375/.469T	24.85	466.6	57.4	727.2	2.7	1.6	12.7	7.31	12.47	.375		6.00	.469	5.33
12X 5X .375/.594T	25.40	478.3	59.2	755.6	2.8	1.6	12.8	7.47	12.59	.375		5.00	.594	5.38
10X 8X .313/.563T	25.94	428.9	62.5	671.1	2.6	1.6	10.7	7.63	10.56	.313		8.00	.563	3.85
12X 6X .375/.531T	26.15	490.3	62.2	787.8	2.8	1.6	12.7	7.69	12.53	.375		6.00	.531	5.36
12X 5X .375/.656T	26.45	498.1	63.1	807.0	2.8	1.6	12.8	7.78	12.66	.375		5.00	.656	5.48
12X 7X .375/.469T	26.45	494.3	63.4	799.3	2.8	1.6	12.6	7.78	12.47	.375		7.00	.469	5.33
7X 7X .438/.688T	26.79	278.7	48.8	382.0	2.0	1.4	8.0	7.88	7.69	.438		7.00	.688	4.13
12X 6X .375/.594T	27.40	512.2	66.8	847.1	2.9	1.7	12.7	8.06	12.59	.375		6.00	.594	5.38
12X 7X .375/.531T	27.95	519.8	69.0	869.5	2.9	1.7	12.6	8.22	12.53	.375		7.00	.531	5.36
7X 7X .438/.750T	28.25	291.6	52.1	420.2	2.0	1.4	8.1	8.31	7.75	.438		7.00	.750	4.16
12X 6X .375/.656T	28.70	533.5	71.4	907.8	3.0	1.7	12.7	8.44	12.66	.375		6.00	.656	5.40
12X 7X .375/.594T	29.44	543.1	74.4	938.1	3.1	1.7	12.6	8.66	12.59	.375		7.00	.594	5.38
14X 5X .438/.531T	29.85	590.0	71.2	1034.8	3.2	1.8	14.5	8.78	14.53	.438		5.00	.531	7.13
14X 5X .438/.594T	30.91	611.7	75.6	1099.9	3.3	1.8	14.5	9.09	14.59	.438		5.00	.594	7.16
12X 7X .375/.656T	30.91	565.8	79.8	1008.3	3.2	1.8	12.6	9.25	12.66	.375		7.00	.656	5.40
12X 8X .375/.594T	31.45	571.0	81.9	1027.4	3.2	1.8	12.5	9.25	12.59	.375		8.00	.594	5.38
14X 6X .438/.531T	31.65	624.7	79.1	1142.4	3.4	1.8	14.5	9.31	14.53	.438		6.00	.531	7.13
14X 5X .438/.656T	31.99	633.1	80.2	1167.8	3.4	1.8	14.6	9.41	14.66	.438		5.00	.656	7.19
7X 7X .500/.875T	32.74	317.9	60.0	485.8	2.2	1.5	8.1	9.63	7.88	.500		7.00	.875	4.82
14X 6X .438/.594T	32.95	648.3	84.4	1220.1	3.5	1.9	14.5	9.69	14.59	.438		6.00	.594	7.16
14X 5X .438/.719T	33.05	652.9	84.6	1233.1	3.5	1.9	14.6	9.72	14.72	.438		5.00	.719	7.21
12X 8X .375/.656T	33.15	594.6	88.2	1107.1	3.3	1.9	12.5	9.75	12.66	.375		8.00	.656	5.40
7X 6X .563/1.000T	33.80	319.9	59.9	492.2	2.2	1.5	8.2	9.94	8.00	.563		6.00	1.000	5.49

1.7500 - 1 3/4 in.

1.750 IN. PLATE (AREA= 91.88 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				DIMENSIONS										FLANGE		SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA				
14X 6X	.438/ .656T	34.20	671.3	89.8	1299.2	3.6	1.9	14.5	10.06	14.66	.438	6.00	.656	.656	7.19				
14X 7X	.438/ .594T	34.95	681.6	93.1	1338.8	3.6	2.0	14.4	10.28	14.59	.438	7.00	.594	.594	7.16				
12X 9X	.375/ .656T	35.39	620.6	96.6	1204.0	3.4	1.9	12.5	10.41	12.66	.375	9.00	.656	.656	5.40				
14X 6X	.438/ .719T	35.50	692.7	95.1	1377.6	3.7	2.0	14.5	10.44	14.72	.438	6.00	.719	.719	7.21				
14X 7X	.438/ .656T	36.45	705.6	99.4	1429.4	3.7	2.0	14.4	10.72	14.66	.438	7.00	.656	.656	7.19				
14X 8X	.438/ .594T	36.99	712.0	101.9	1457.1	3.8	2.0	14.3	10.88	14.59	.438	8.00	.594	.594	7.16				
7X 7X	.563/ 1.000T	37.20	341.4	67.7	550.6	2.3	1.6	8.1	10.94	8.00	.563	7.00	1.000	5.49	5.49				
16X 5X	.500/ .594T	37.30	754.8	95.6	1556.1	3.9	2.1	16.3	10.97	16.59	.500	5.00	.594	.594	9.17				
14X 7X	.438/ .719T	37.94	728.4	105.7	1520.5	3.8	2.1	14.4	11.16	14.72	.438	7.00	.719	.719	7.21				
16X 5X	.500/ .656T	38.35	776.0	100.5	1637.4	4.0	2.1	16.3	11.28	16.66	.500	5.00	.656	.656	9.21				
14X 8X	.438/ .656T	38.69	736.6	109.0	1558.1	3.9	2.1	14.3	11.38	14.66	.438	8.00	.656	.656	7.19				
16X 6X	.500/ .594T	39.30	792.7	105.4	1706.6	4.1	2.2	16.2	11.56	16.59	.500	6.00	.594	.594	9.17				
16X 5X	.500/ .719T	39.41	796.7	105.5	1720.4	4.1	2.2	16.3	11.59	16.72	.500	5.00	.719	.719	9.24				
12X 9X	.438/ .719T	39.85	646.3	106.7	1324.9	3.6	2.0	12.4	11.72	12.72	.438	9.00	.719	.719	6.34				
14X 8X	.438/ .719T	40.39	759.9	116.2	1659.9	4.0	2.2	14.3	11.84	14.72	.438	8.00	.719	.719	7.21				
16X 6X	.500/ .656T	40.60	816.1	111.4	1805.2	4.2	2.2	16.2	11.94	16.66	.500	6.00	.656	.656	9.21				
16X 7X	.500/ .594T	41.34	827.1	115.3	1856.3	4.2	2.2	16.1	12.16	16.59	.500	7.00	.594	.594	9.17				
7X 7X	.625/ 1.125T	41.65	363.0	75.3	615.9	2.4	1.7	8.2	12.25	8.13	.625	7.00	1.125	6.18	6.18				
16X 6X	.500/ .719T	41.85	838.4	117.5	1902.9	4.3	2.3	16.2	12.31	16.72	.500	6.00	.719	.719	9.24				
16X 5X	.500/ .875T	42.09	845.0	118.0	1929.0	4.3	2.3	16.3	12.38	16.88	.500	5.00	.875	.875	9.32				
12X 10X	.438/ .719T	42.30	670.2	115.9	1430.1	3.7	2.1	12.3	12.44	12.72	.438	10.00	.719	.719	6.34				
16X 7X	.500/ .656T	42.81	851.8	122.3	1968.6	4.3	2.3	16.1	12.59	16.66	.500	7.00	.656	.656	9.21				
14X 9X	.438/ .719T	42.81	788.8	126.7	1798.2	4.1	2.3	14.2	12.59	14.72	.438	9.00	.719	.719	7.21				
16X 7X	.500/ .719T	44.30	875.5	129.4	2082.3	4.5	2.4	16.1	13.03	16.72	.500	7.00	.719	.719	9.24				
16X 6X	.500/ .875T	45.05	889.6	132.5	2148.0	4.5	2.4	16.2	13.25	16.88	.500	6.00	.875	.875	9.32				
16X 8X	.500/ .656T	45.05	884.3	133.2	2130.7	4.5	2.4	16.0	13.25	16.66	.500	8.00	.656	.656	9.21				
14X 10X	.438/ .719T	45.25	814.7	137.2	1934.1	4.3	2.4	14.1	13.31	14.72	.438	10.00	.719	.719	7.21				
7X 7X	.688/ 1.250T	46.10	383.1	82.9	681.8	2.5	1.8	8.2	13.56	8.25	.688	7.00	1.250	6.88	6.88				
16X 8X	.500/ .719T	46.75	909.0	141.4	2259.7	4.6	2.5	16.0	13.75	16.72	.500	8.00	.719	.719	9.24				
16X 9X	.500/ .656T	47.29	914.1	144.1	2292.1	4.7	2.5	15.9	13.91	16.66	.500	9.00	.656	.656	9.21				
18X 6X	.563/ .656T	47.80	965.4	136.7	2444.4	4.8	2.5	17.9	14.06	18.66	.563	6.00	.656	.656	11.49				
16X 7X	.500/ .875T	48.04	929.2	147.1	2365.7	4.7	2.5	16.1	14.13	16.88	.500	7.00	.875	.875	9.32				
18X 6X	.563/ .719T	49.10	988.5	143.6	2566.7	4.9	2.6	17.9	14.44	18.72	.563	6.00	.719	.719	11.52				
16X 9X	.500/ .719T	49.20	939.1	153.3	2433.8	4.8	2.6	15.9	14.47	16.72	.500	9.00	.719	.719	9.24				
16X 8X	.500/ .875T	51.00	964.2	161.6	2788.0	4.9	2.7	16.0	15.00	16.88	.500	8.00	.875	.875	9.32				
18X 7X	.563/ .719T	51.54	1026.3	156.9	2785.5	5.1	2.7	17.8	15.16	18.72	.563	7.00	.719	.719	11.52				
16X 10X	.500/ .719T	51.65	966.8	165.2	2806.4	4.9	2.7	15.8	15.19	16.72	.500	10.00	.719	.719	9.24				
18X 8X	.563/ .656T	52.29	1035.7	161.2	2846.7	5.2	2.7	17.7	15.38	18.66	.563	8.00	.656	.656	11.49				
14X 10X	.438/ .875T	53.55	870.6	163.7	2291.2	4.6	2.6	14.0	15.75	14.88	.500	10.00	.875	.875	8.32				
16X 9X	.500/ .875T	53.99	995.7	176.1	2788.3	5.1	2.8	15.8	15.88	16.88	.500	9.00	.875	.875	9.32				
18X 8X	.563/ .719T	53.99	1060.4	170.1	3008.8	5.3	2.8	17.6	15.88	18.72	.563	8.00	.719	.719	11.52				
18X 9X	.563/ .656T	54.50	1066.0	173.2	3041.4	5.3	2.9	17.6	16.03	18.66	.563	9.00	.656	.656	11.49				
18X 6X	.563/ 1.000T	54.84	1078.5	173.6	3102.9	5.4	2.9	17.9	16.13	19.00	.563	6.00	1.000	1.000	11.68				
18X 7X	.563/ .875T	55.25	1081.3	176.4	3129.4	5.4	2.9	17.7	16.25	18.88	.563	7.00	.875	.875	11.61				
18X 9X	.563/ .719T	56.41	1091.6	183.3	3213.4	5.4	2.9	17.5	16.59	18.72	.563	9.00	.719	.719	11.52				

1.7500 - 1 3/4 in.



1.750 IN. PLATE (AREA= 91.88 SQ.IN.)

NOMINAL SIZE	SECTION		ZFL	INERTIA	R	YP	VF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
	WT/FT	ZPL								WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X10X .500/ .875T	56.95	1023.6	190.5	2992.5	5.2	2.9	15.7	16.75	16.88	.500	10.00	.875	9.32
18X10X .563/ .719T	58.85	1120.3	196.7	3425.2	5.6	3.1	17.4	17.31	18.72	.563	10.00	.719	11.52
18X 8X .563/1.000T	61.64	1157.6	210.5	3696.3	5.8	3.2	17.6	18.13	19.00	.563	8.00	1.000	11.68
18X11X .563/ .875T	67.15	1205.7	241.0	4142.9	6.1	3.4	17.2	19.75	18.88	.563	11.00	.875	11.61
18X10X .563/1.000T	68.44	1220.4	247.5	4269.1	6.2	3.5	17.3	20.13	19.00	.563	10.00	1.000	11.68
18X12X .563/ .875T	70.14	1229.6	257.0	4384.7	6.2	3.6	17.1	20.63	18.88	.563	12.00	.875	11.61
18X 9X .625/1.125T	72.69	1228.2	255.4	4414.5	6.2	3.6	17.2	21.38	19.13	.625	9.00	1.125	13.05
21X 9X .688/ .875T	75.85	1384.0	269.5	5330.7	6.8	3.9	19.8	22.31	21.88	.688	9.00	.875	16.26
21X10X .688/ .875T	78.85	1414.5	288.2	5657.8	7.0	4.0	19.6	23.19	22.13	.688	10.00	.875	16.26
21X 8X .688/1.125T	79.70	1430.8	292.1	5792.9	7.1	4.1	19.8	23.44	22.13	.688	8.00	1.125	16.43
21X11X .688/ .875T	81.80	1442.4	306.8	5978.2	7.2	4.1	19.5	24.06	21.88	.688	11.00	.875	16.26
21X 9X .688/1.125T	83.50	1464.6	315.8	6204.4	7.3	4.2	19.6	24.56	22.13	.688	9.00	1.125	16.43
21X12X .688/ .875T	84.80	1467.9	325.4	6294.1	7.3	4.3	19.3	24.94	21.88	.688	12.00	.875	16.26
21X10X .688/1.125T	87.35	1495.5	339.5	6607.6	7.5	4.4	19.5	25.69	22.13	.688	10.00	1.125	16.43
21X13X .688/ .875T	87.75	1491.1	343.7	6608.6	7.5	4.4	19.2	25.81	21.88	.688	13.00	.875	16.26
24X10X .750/ .875T	90.95	1649.8	353.2	7747.6	8.1	4.7	21.9	26.75	24.88	.750	10.00	.875	19.97
24X 8X .750/1.125T	91.80	1665.4	357.5	7912.2	8.2	4.8	22.1	27.00	25.13	.750	8.00	1.125	20.16
24X11X .750/ .875T	93.94	1678.6	374.1	8146.1	8.3	4.9	21.8	27.63	24.88	.750	11.00	.875	19.97
24X 9X .750/1.125T	95.64	1701.7	384.3	8421.7	8.4	5.0	21.9	28.13	25.13	.750	9.00	1.125	20.16
24X12X .750/ .875T	96.90	1705.7	395.0	8541.4	8.4	5.0	21.6	28.50	24.88	.750	12.00	.875	19.97
24X10X .750/1.125T	99.45	1735.0	411.2	8936.0	8.6	5.2	21.7	29.25	25.13	.750	10.00	1.125	20.16
24X13X .750/ .875T	99.89	1731.1	416.3	8936.7	8.6	5.2	21.5	29.38	24.88	.750	13.00	.875	19.97
21X14X .688/1.125T	102.65	1594.6	434.7	8157.1	8.2	5.1	18.8	30.19	22.13	.688	14.00	1.125	16.43
21X15X .688/1.125T	106.45	1614.3	458.4	8525.4	8.3	5.3	18.6	31.31	22.13	.688	15.00	1.125	16.43
24X12X .750/1.125T	107.10	1792.6	464.9	9923.4	9.0	5.5	21.3	31.50	25.13	.750	12.00	1.125	20.16
24X13X .750/1.125T	118.94	1818.0	492.8	10407.7	9.1	5.7	21.2	32.63	25.13	.750	13.00	1.125	20.16
27X 9X .875/1.500T	126.24	2047.8	560.8	13317.5	10.2	6.5	23.7	37.13	28.50	.875	9.00	1.500	26.47
27X10X .875/1.375T	127.09	2050.2	568.6	13412.1	10.2	6.5	23.6	37.38	28.38	.875	10.00	1.375	26.36
27X13X .875/1.125T	130.05	2063.2	594.3	13786.1	10.3	6.7	23.2	38.25	28.13	.875	13.00	1.125	26.15
27X10X .875/1.500T	131.34	2083.6	608.4	14099.6	10.4	6.8	23.5	38.63	28.50	.875	10.00	1.500	26.47
27X11X .875/1.375T	131.75	2082.7	605.1	14126.6	10.4	6.8	23.3	38.75	28.38	.875	11.00	1.375	26.36
27X14X .875/1.125T	133.89	2088.2	624.3	14368.6	10.5	6.9	23.0	39.38	28.13	.875	14.00	1.125	26.15
27X15X .875/1.125T	137.70	2111.1	653.8	14916.5	10.6	7.1	22.8	40.50	28.13	.875	15.00	1.125	26.15
27X13X .875/1.500T	146.64	2172.6	719.4	16348.4	11.0	7.5	22.7	43.13	28.50	.875	13.00	1.500	26.47
30X10X1.000/1.375T	148.75	2296.8	682.1	17424.3	11.3	7.6	25.5	45.00	31.50	1.000	10.00	1.375	33.13
30X10X1.000/1.500T	153.00	2332.0	717.1	18236.5	11.5	7.8	25.4	45.00	31.50	1.000	10.00	1.500	33.25
30X11X1.000/1.375T	153.44	2331.1	722.3	18269.0	11.5	7.8	25.3	45.13	31.38	1.000	11.00	1.375	33.13
30X10X1.000/1.750T	161.50	2396.6	786.7	19841.7	11.9	8.3	25.2	47.50	31.75	1.000	10.00	1.750	33.50

1.7500 - 1 3/4 in.

2.000 IN. PLATE (AREA=120.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		DIMENSIONS		FLANGE		SHEAR				
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WIDTH	THICK	AREA
3X 2X .125/ .180T	2.55	47.9	11.7	.6	1.0	4.2	.75	3.19	.125	2.00	.180	.65
4X 2X .125/ .180T	2.99	53.4	10.6	.7	1.0	5.2	.88	4.19	.125	2.00	.180	.77
3X 2X .188/ .250T	3.60	50.8	12.4	.7	1.0	4.2	1.06	3.25	.188	2.00	.250	.99
3X 2X .188/ .313T	4.05	52.8	12.8	.7	1.0	4.3	1.19	3.31	.188	2.00	.313	1.00
3X 3X .188/ .250T	4.45	54.5	13.4	.7	1.0	4.2	1.31	3.25	.188	3.00	.250	.99
4X 2X .188/ .313T	4.69	61.4	12.2	.7	1.0	5.3	1.38	4.31	.188	2.00	.313	1.19
5X 2X .188/ .250T	4.90	60.3	11.6	.8	1.1	6.2	1.44	5.25	.188	2.00	.250	1.36
5X 2X .188/ .313T	5.30	72.4	12.3	.8	1.1	6.3	1.56	5.31	.188	2.00	.313	1.37
6X 2X .188/ .313T	5.95	86.4	12.8	.9	1.1	7.2	1.75	6.31	.188	2.00	.313	1.56
6X 3X .188/ .250T	6.39	91.4	13.8	.9	1.1	7.2	1.88	6.25	.188	3.00	.250	1.55
4X 4X .188/ .313T	6.80	75.1	15.4	.8	1.1	5.2	2.00	4.31	.188	4.00	.313	1.19
6X 3X .188/ .313T	7.00	99.1	15.0	.9	1.1	7.2	2.06	6.31	.188	3.00	.313	1.56
5X 4X .188/ .313T	7.45	91.7	16.1	.9	1.1	6.2	2.19	5.31	.188	4.00	.313	1.37
6X 4X .188/ .313T	8.09	111.8	17.2	1.0	1.1	7.2	2.38	6.31	.188	4.00	.313	1.56
5X 3X .250/ .438T	8.70	97.4	16.9	.9	1.1	6.3	2.56	5.44	.250	3.00	.438	1.86
7X 3X .250/ .313T	9.15	127.1	17.5	1.1	1.1	8.2	2.69	7.31	.250	3.00	.313	2.33
6X 3X .250/ .438T	9.55	119.8	18.4	1.0	1.1	7.3	2.81	6.44	.250	3.00	.438	2.11
7X 3X .250/ .375T	9.79	136.7	18.9	1.1	1.1	8.2	2.88	7.38	.250	3.00	.375	2.35
8X 3X .250/ .313T	10.00	153.5	19.3	1.2	1.2	9.2	2.94	8.31	.250	3.00	.313	2.58
7X 4X .250/ .313T	10.20	142.1	20.0	1.2	1.1	8.2	3.00	7.31	.250	4.00	.313	2.33
7X 3X .250/ .438T	10.40	146.1	20.3	1.2	1.2	8.3	3.06	7.44	.250	3.00	.438	2.36
8X 3X .250/ .375T	10.64	165.2	20.9	1.3	1.2	9.2	3.13	8.38	.250	3.00	.375	2.60
8X 4X .250/ .313T	11.05	171.9	22.1	1.3	1.2	9.1	3.25	8.31	.250	4.00	.313	2.58
8X 3X .250/ .438T	11.25	176.5	22.5	1.3	1.2	9.3	3.31	8.44	.250	3.00	.438	2.61
6X 5X .250/ .375T	11.49	140.3	22.5	1.1	1.2	7.2	3.38	6.38	.250	5.00	.375	2.10
8X 4X .250/ .375T	11.90	186.6	24.2	1.3	1.2	9.2	3.38	8.38	.250	4.00	.375	2.60
7X 5X .250/ .375T	12.34	171.9	24.9	1.3	1.2	8.2	3.63	7.38	.250	5.00	.375	2.35
6X 5X .250/ .438T	12.55	152.0	24.6	1.2	1.2	7.3	3.69	6.44	.250	5.00	.438	2.11
8X 4X .250/ .438T	12.75	201.4	26.4	1.4	1.2	9.2	3.75	8.44	.250	4.00	.438	2.61
8X 5X .250/ .375T	13.19	207.7	27.7	1.4	1.2	9.2	3.88	8.38	.250	5.00	.375	2.58
7X 5X .250/ .438T	13.40	186.3	27.4	1.3	1.2	8.2	3.94	7.44	.250	5.00	.438	2.36
6X 6X .250/ .438T	14.04	166.9	27.7	1.3	1.2	7.2	4.13	6.44	.250	6.00	.438	2.11
8X 5X .250/ .438T	14.25	224.6	30.4	1.5	1.2	9.2	4.19	8.44	.250	5.00	.438	2.61
9X 4X .313/ .375T	14.65	234.1	28.8	1.5	1.2	10.1	4.31	9.38	.313	4.00	.375	3.56
7X 6X .250/ .438T	14.89	204.6	30.9	1.4	1.2	8.2	4.38	7.44	.250	6.00	.438	2.36
9X 4X .313/ .438T	15.50	250.7	31.2	1.6	1.3	10.2	4.56	9.44	.313	4.00	.438	3.58
10X 4X .313/ .438T	15.74	277.2	32.1	1.7	1.3	11.1	4.63	10.38	.313	4.00	.375	3.87
8X 6X .250/ .438T	15.74	246.6	34.3	1.6	1.3	9.2	4.63	8.44	.250	6.00	.438	2.61
9X 5X .313/ .375T	15.95	257.9	32.6	1.6	1.3	10.1	4.69	9.38	.313	5.00	.375	3.56
9X 4X .313/ .500T	16.35	266.7	33.6	1.7	1.3	10.2	4.81	9.50	.313	4.00	.500	3.60
10X 4X .313/ .438T	16.59	296.0	34.8	1.8	1.3	11.1	4.88	10.44	.313	4.00	.438	3.89
10X 5X .313/ .375T	17.00	304.2	36.2	1.8	1.3	11.1	5.08	10.38	.313	5.00	.375	3.87
9X 4X .313/ .563T	17.20	282.9	36.1	1.7	1.3	10.3	5.06	9.56	.313	4.00	.563	3.62
10X 4X .313/ .500T	17.44	314.7	37.5	1.8	1.3	11.2	5.13	10.50	.313	4.00	.500	3.91
10X 5X .313/ .438T	18.05	326.2	39.6	1.9	1.3	11.1	5.31	10.44	.313	5.00	.438	3.89



2.000 IN. PLATE (AREA=120.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				DIMENSIONS				BEAM				FLANGE				SHEAR											
		WT/FT		ZPL		ZFL		INERTIA		R		YP		YF		AREA		DEPTH		WEB		THICK		WIDTH		THICK		AREA	
18X 4X	5/31/3/	18.29	332.5	40.1	449.7	1.9	1.4	11.2	5.38	10.56	.313	4.00	.563	3.93															
18X 6X	313/	18.50	302.3	40.0	404.3	1.8	1.3	10.1	5.44	9.44	.313	6.00	.430	3.91															
18X 8X	313/	19.14	347.7	42.9	477.6	1.9	1.4	11.1	5.63	10.58	.313	5.00	.500	3.91															
7X 7X	313/	19.35	244.5	39.0	319.8	1.6	1.3	8.2	5.69	7.50	.313	7.00	.500	2.97															
18X 6X	313/	19.55	354.4	44.3	490.2	2.0	1.4	11.1	5.75	10.44	.313	6.00	.430	3.89															
9X 6X	313/	19.75	323.3	43.6	442.0	1.9	1.4	10.1	5.81	9.50	.313	6.00	.500	3.60															
18X 5X	313/	20.20	368.6	46.3	516.3	2.0	1.4	11.2	5.94	10.56	.313	5.00	.563	3.93															
7X 7X	313/	20.84	261.2	42.5	349.2	1.7	1.3	8.2	6.13	7.56	.313	7.00	.563	2.99															
18X 6X	313/	20.84	378.8	48.4	536.6	2.1	1.4	11.1	6.13	10.50	.313	6.00	.500	3.91															
12X 4X	375/	21.45	348.8	48.6	490.4	2.0	1.4	10.1	6.31	9.50	.313	7.00	.500	3.60															
12X 4X	375/	21.69	427.3	47.4	617.8	2.2	1.4	13.0	6.38	12.47	.375	4.00	.469	5.43															
8X 7X	313/	21.90	314.4	47.6	482.4	1.9	1.4	9.2	6.44	8.56	.313	7.00	.563	3.31															
18X 6X	313/	22.10	401.9	52.4	582.4	2.1	1.4	11.1	6.50	10.56	.313	6.00	.563	3.93															
18X 7X	313/	22.54	407.7	53.9	594.8	2.2	1.5	11.0	6.63	10.50	.313	7.00	.500	3.91															
12X 4X	375/	22.54	449.0	50.6	660.7	2.3	1.5	13.1	6.63	12.53	.375	5.00	.531	5.45															
12X 5X	375/	23.26	465.2	53.5	694.5	2.3	1.5	13.0	6.84	12.47	.375	5.00	.469	5.43															
12X 4X	375/	23.39	470.1	53.8	704.1	2.4	1.5	13.1	6.88	12.59	.375	4.00	.594	5.47															
7X 7X	375/	23.80	261.2	47.0	381.8	1.7	1.4	8.3	7.08	7.63	.375	7.00	.625	3.61															
18X 7X	313/	24.00	432.7	58.5	647.6	2.3	1.5	11.1	7.06	10.56	.313	7.00	.563	3.93															
12X 4X	375/	24.24	490.0	56.8	746.3	2.4	1.5	13.1	7.13	12.66	.375	4.00	.656	5.50															
12X 5X	375/	24.34	490.2	57.5	747.8	2.4	1.5	13.0	7.16	12.53	.375	5.00	.531	5.45															
9X 8X	313/	24.85	397.1	58.5	589.5	2.2	1.5	10.1	7.31	9.56	.313	8.00	.563	3.62															
12X 6X	375/	24.85	500.2	59.6	770.1	2.5	1.5	12.9	7.31	12.47	.375	6.00	.469	5.43															
12X 5X	375/	25.40	513.7	61.4	799.7	2.5	1.6	13.0	7.67	12.59	.375	5.00	.594	5.47															
18X 8X	313/	25.94	462.3	64.8	714.3	2.4	1.5	11.0	7.63	10.56	.313	8.00	.563	3.93															
12X 6X	375/	26.15	528.0	64.3	833.3	2.6	1.6	13.0	7.69	12.53	.375	6.00	.531	5.45															
12X 5X	375/	26.45	537.1	65.3	853.3	2.6	1.6	13.1	7.78	12.66	.375	5.00	.656	5.50															
12X 7X	375/	26.45	532.9	65.6	845.4	2.6	1.6	12.9	7.78	12.47	.375	7.00	.469	5.43															
7X 7X	438/	26.79	300.4	51.7	427.3	1.8	1.4	8.3	7.88	7.69	.438	7.80	.688	4.24															
12X 6X	375/	27.40	554.2	69.0	895.3	2.6	1.6	13.0	8.06	12.59	.375	6.00	.594	5.47															
12X 7X	375/	27.95	563.4	71.2	918.9	2.7	1.6	12.9	8.22	12.53	.375	7.00	.531	5.45															
7X 7X	438/	28.25	315.3	55.1	457.2	1.9	1.5	8.3	8.31	7.75	.438	7.00	.750	4.27															
12X 6X	375/	28.70	579.8	73.7	958.9	2.7	1.7	13.0	8.44	12.66	.375	6.00	.656	5.50															
12X 7X	375/	29.44	591.7	76.7	990.7	2.8	1.7	12.9	8.66	12.59	.375	7.00	.594	5.47															
14X 5X	438/	29.85	642.4	73.4	1089.1	2.9	1.7	14.8	8.78	14.53	.438	5.00	.531	7.24															
14X 5X	438/	30.91	668.4	77.9	1157.0	3.0	1.7	14.9	9.09	14.59	.438	5.00	.594	7.27															
12X 7X	375/	30.91	619.4	82.2	1064.3	2.9	1.7	12.9	9.09	12.66	.375	7.00	.656	5.50															
12X 8X	375/	31.45	626.1	84.3	1084.6	2.9	1.7	12.9	9.25	12.59	.375	8.00	.594	5.47															
14X 6X	438/	31.65	684.5	81.3	1201.5	3.0	1.8	14.8	9.31	14.53	.438	6.00	.531	7.24															
14X 5X	438/	31.99	694.6	82.5	1227.9	3.1	1.8	14.9	9.41	14.66	.438	5.00	.656	7.30															
7X 7X	500/	32.74	346.7	63.1	527.3	2.0	1.5	8.4	9.63	7.88	.500	7.00	.875	4.94															
14X 6X	438/	32.95	713.5	86.7	1282.8	3.1	1.8	14.8	9.69	14.59	.438	6.00	.594	7.27															
14X 5X	438/	33.05	718.6	86.9	1296.2	3.2	1.8	14.9	9.72	14.72	.438	5.00	.719	7.32															
12X 8X	375/	33.15	655.6	90.7	1168.4	3.0	1.8	12.9	9.75	12.66	.375	8.00	.656	5.50															
7X 6X	563/1.000	33.80	349.3	63.1	534.2	2.0	1.5	8.5	9.94	8.00	.563	6.00	1.000	5.63															

2.000 IN. PLATE (AREA=120.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	THICK	THICK	THICK	
14X 6X	.556T	34.20	741.9	92.2	1365.6	3.2	1.8	14.8	10.06	14.66	.438	6.00	.656	7.30	7.30	
14X 7X	.594T	34.95	755.0	95.6	1407.3	3.3	1.9	14.7	10.28	14.59	.438	7.00	.594	7.27	7.27	
12X 9X	.375/	35.39	688.6	99.2	1270.8	3.1	1.6	12.6	10.41	12.66	.375	9.00	.656	5.50	5.50	
14X 6X	.719T	35.50	768.7	97.6	1447.9	3.3	1.9	14.8	10.44	14.72	.438	6.00	.719	7.32	7.32	
14X 7X	.656T	36.45	785.2	101.9	1502.4	3.4	1.9	14.7	10.72	14.66	.438	7.00	.656	7.30	7.30	
14X 8X	.594T	36.99	793.5	104.5	1531.7	3.4	1.9	14.7	10.88	14.59	.438	8.00	.594	7.27	7.27	
7X 7X	.563/1.000T	37.20	375.3	71.0	596.7	2.1	1.6	8.4	10.94	8.00	.563	7.00	1.000	5.63	5.63	
16X 5X	.500/	.594T	37.30	840.2	98.0	1631.9	3.5	1.9	16.6	10.97	16.59	.500	5.00	.594	9.30	
14X 7X	.719T	37.94	814.1	108.3	1598.3	3.5	2.0	14.8	11.16	14.72	.438	7.00	.719	7.32	7.32	
16X 5X	.500/	.656T	38.35	866.6	102.9	1716.9	3.6	2.0	16.7	11.28	16.66	.500	5.00	.656	9.33	
14X 8X	.656T	38.69	824.9	111.6	1638.1	3.5	2.0	14.7	11.38	14.66	.438	8.00	.656	7.30	7.30	
16X 6X	.500/	.594T	39.30	887.8	108.0	1789.6	3.7	2.0	16.6	11.56	16.59	.500	6.00	.594	9.30	
16X 5X	.500/	.719T	39.41	892.6	108.0	1803.8	3.7	2.0	16.7	11.59	16.72	.500	5.00	.719	9.36	
12X 9X	.438/	.719T	39.85	723.4	109.5	1399.9	3.3	1.9	12.8	11.72	12.72	.438	9.00	.719	6.45	
14X 8X	.719T	40.39	855.1	118.9	1745.5	3.6	2.0	14.7	11.88	14.72	.438	8.00	.719	7.32	7.32	
16X 6X	.500/	.656T	40.60	917.5	114.1	1893.1	3.8	2.1	16.6	11.94	16.66	.500	6.00	.656	9.33	
16X 7X	.500/	.594T	41.34	931.8	118.0	1946.9	3.8	2.1	16.5	12.16	16.59	.500	7.00	.594	9.30	
7X 7X	.625/1.125T	41.65	402.2	78.7	667.0	2.2	1.7	8.5	12.25	8.13	.625	7.00	1.125	.625	6.33	
16X 6X	.500/	.719T	41.85	945.9	120.2	1995.7	3.9	2.1	16.6	12.31	16.72	.500	6.00	.719	9.36	
16X 5X	.500/	.875T	42.09	954.0	120.7	2022.9	3.9	2.1	16.8	12.38	16.88	.500	5.00	.875	9.44	
12X 10X	.438/	.719T	42.30	754.6	118.9	1511.7	3.4	2.0	12.7	12.44	12.72	.438	10.00	.719	6.45	
16X 7X	.500/	.656T	42.81	963.5	125.0	2065.0	3.9	2.1	16.5	12.59	16.66	.500	7.00	.656	9.33	
14X 9X	.438/	.719T	42.81	893.0	129.6	1891.9	3.8	2.1	14.6	12.59	14.72	.438	9.00	.719	7.32	
16X 7X	.500/	.719T	44.30	994.0	132.2	2184.7	4.1	2.2	16.5	13.03	16.72	.500	7.00	.719	9.36	
16X 6X	.500/	.875T	45.05	1012.0	135.3	2236.7	4.1	2.2	16.7	13.25	16.88	.500	6.00	.875	9.44	
16X 8X	.500/	.656T	45.05	1005.8	136.0	2236.0	4.1	2.2	16.4	13.25	16.66	.500	8.00	.656	9.33	
14X 10X	.438/	.719T	45.25	927.6	140.2	2036.2	3.9	2.2	14.5	13.31	14.72	.438	10.00	.719	7.32	
7X 7X	.688/1.250T	46.10	427.5	86.6	738.2	2.4	1.7	8.5	13.56	8.25	.688	7.00	1.250	.688	7.05	
16X 8X	.500/	.719T	46.75	1038.2	144.3	2372.3	4.2	2.3	16.4	13.75	16.72	.500	8.00	.719	9.36	
16X 9X	.500/	.656T	47.29	1045.2	147.1	2406.8	4.2	2.3	16.4	13.91	16.66	.500	9.00	.656	9.33	
18X 6X	.563/	.656T	47.80	1102.9	139.7	2561.4	4.4	2.3	18.3	14.06	18.66	.563	6.00	.656	11.63	
16X 7X	.500/	.875T	48.04	1064.5	150.1	2484.1	4.3	2.3	16.5	14.13	16.88	.500	7.00	.875	9.44	
18X 6X	.563/	.719T	49.10	1132.8	146.6	2690.2	4.5	2.4	18.3	14.44	18.72	.563	6.00	.719	11.67	
16X 9X	.500/	.719T	49.20	1078.4	156.4	2556.8	4.4	2.4	16.4	14.47	16.72	.500	9.00	.719	9.36	
16X 8X	.500/	.875T	51.00	1111.5	164.8	2709.5	4.5	2.4	16.4	15.00	16.88	.500	8.00	.875	9.44	
18X 7X	.563/	.719T	51.54	1182.5	160.1	2921.3	4.6	2.5	18.2	15.16	18.72	.563	7.00	.719	11.67	
16X 10X	.500/	.719T	51.65	1115.7	168.5	2740.3	4.5	2.5	16.3	15.19	16.72	.500	10.00	.719	9.36	
18X 8X	.563/	.656T	52.29	1195.2	164.4	2986.2	4.7	2.5	18.2	15.38	18.66	.563	8.00	.656	11.63	
14X 10X	.500/	.875T	53.55	1004.6	167.1	2418.5	4.2	2.4	14.5	15.75	14.88	.500	10.00	.875	8.44	
16X 9X	.500/	.875T	53.99	1154.3	179.5	2933.6	4.6	2.5	16.3	15.88	16.88	.500	9.00	.875	9.44	
18X 8X	.563/	.719T	53.99	1227.9	173.5	3149.3	4.8	2.6	18.2	15.88	18.72	.563	8.00	.719	11.67	
18X 9X	.563/	.656T	54.50	1235.6	176.6	3192.5	4.8	2.6	18.1	16.03	18.66	.563	9.00	.656	11.63	
18X 6X	.563/1.000T	54.84	1251.1	177.0	3256.8	4.9	2.6	18.4	16.13	19.00	.563	6.00	1.000	.563	11.82	
18X 7X	.563/	.875T	55.25	1255.2	179.9	3285.3	4.9	2.6	18.3	16.25	18.88	.563	7.00	.875	11.76	
18X 9X	.563/	.719T	56.41	1269.8	186.9	3375.1	5.0	2.7	18.1	16.59	18.72	.563	9.00	.719	11.67	

2.0000 - 2 in.



2.000 IN. PLATE (AREA=120.00 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	VF	***** BEAM DIMENSIONS *****			SHEAR AREA
	WT/FT	ZPL	ZFL				DEPTH	THICK	WIDTH	THICK
16X10X .500/ .875T	56.95	1192.7	194.1	4.0	2.6	16.2	16.75	.500	10.00	.875
18X10X .563/ .719T	58.05	1300.0	200.4	5.1	2.0	10.0	17.31	.563	10.00	.719
18X 8X .563/1.000T	61.64	1350.6	214.4	5.3	2.9	10.1	18.13	.563	8.00	1.000
18X11X .563/ .875T	67.15	1426.0	245.2	5.6	3.1	17.0	19.75	.563	11.00	.875
18X10X .563/1.000T	68.44	1445.9	251.8	5.7	3.1	17.9	20.13	.563	10.00	1.000
18X12X .563/ .875T	70.14	1459.7	261.4	5.7	3.2	17.7	20.63	.563	12.00	.875
18X 9X .625/1.125T	72.69	1450.5	260.0	5.7	3.2	17.9	21.30	.625	9.00	1.125
21X 9X .688/ .875T	75.85	1648.8	274.5	6.3	3.4	20.5	22.31	.688	9.00	.875
21X10X .688/ .875T	78.05	1690.0	293.4	6.5	3.5	20.3	23.19	.688	10.00	.875
21X 8X .688/1.125T	79.70	1710.9	297.4	6.5	3.6	20.6	23.44	.688	8.00	1.125
21X11X .688/ .875T	81.80	1729.4	312.2	6.6	3.7	20.2	24.06	.688	11.00	.875
21X 9X .688/1.125T	83.50	1759.0	321.5	6.7	3.7	20.4	24.56	.688	9.00	1.125
21X12X .688/ .875T	84.80	1764.9	331.1	6.8	3.8	20.1	24.94	.688	12.00	.875
21X10X .688/1.125T	87.35	1802.3	345.5	6.9	3.9	20.2	25.69	.688	10.00	1.125
21X13X .688/ .875T	87.75	1797.4	349.6	6.9	3.9	20.0	25.81	.688	13.00	.875
24X10X .750/ .875T	90.95	1991.7	359.7	7.5	4.1	22.0	26.75	.750	10.00	.875
24X 8X .750/1.125T	91.80	2012.0	364.1	7.5	4.2	23.0	27.00	.750	8.00	1.125
24X11X .750/ .875T	93.94	2031.3	380.8	7.6	4.2	22.6	27.63	.750	11.00	.875
24X 9X .750/1.125T	95.64	2062.0	391.3	7.8	4.3	22.8	28.13	.750	9.00	1.125
24X12X .750/ .875T	96.90	2068.7	402.0	7.8	4.4	22.5	28.50	.750	12.00	.875
24X10X .750/1.125T	99.45	2108.0	418.6	8.0	4.5	22.6	29.25	.750	10.00	1.125
24X13X .750/ .875T	99.89	2103.9	423.6	8.0	4.5	22.4	29.38	.750	13.00	.875
21X14X .688/1.125T	102.65	1943.1	442.0	7.6	4.5	19.7	30.19	.688	14.00	1.125
21X15X .688/1.125T	106.45	1971.5	466.0	7.8	4.6	19.5	31.31	.688	15.00	1.125
24X12X .750/1.125T	107.10	2108.4	473.0	8.3	4.8	22.3	31.50	.750	12.00	1.125
24X13X .750/1.125T	110.94	2224.2	500.4	8.5	5.0	22.1	32.63	.750	13.00	1.125
27X 9X .875/1.500T	126.24	2513.9	571.6	9.5	5.7	24.8	37.13	.875	9.00	1.500
27X10X .875/1.375T	127.09	2517.0	579.5	9.5	5.7	24.7	37.38	.875	10.00	1.375
27X13X .875/1.125T	130.05	2536.8	605.4	9.6	5.8	24.3	38.25	.875	13.00	1.125
27X10X .875/1.500T	131.34	2563.1	611.9	9.7	5.9	24.6	38.63	.875	10.00	1.500
27X11X .875/1.375T	131.75	2562.5	616.5	9.8	5.9	24.5	38.75	.875	11.00	1.375
27X14X .875/1.125T	133.89	2571.3	635.9	9.8	6.0	24.2	39.38	.875	14.00	1.125
27X13X .875/1.500T	137.70	2602.9	665.9	10.0	6.1	24.0	40.50	.875	15.00	1.500
30X10X1.000/1.375T	146.64	2686.5	732.8	10.4	6.5	24.0	43.13	.875	13.00	1.500
30X11X1.000/1.375T	148.75	2830.3	696.5	10.7	6.6	26.8	43.75	1.000	10.00	1.375
30X10X1.000/1.500T	153.00	2877.2	732.2	10.9	6.8	26.7	45.00	1.000	10.00	1.500
30X11X1.000/1.375T	153.44	2876.6	737.3	10.9	6.8	26.6	45.13	1.000	11.00	1.375
30X10X1.000/1.750T	161.50	2963.6	803.1	11.3	7.2	26.6	47.50	1.000	10.00	1.750

2.0000 - 2 in.

APPENDIX D  
PROPERTIES OF COMBINED BEAM AND PLATE FOR TI 6AL-4V EXTRA  
LOW INTERSTITIAL MATERIAL



\*\*\*\*\* BEAM DIMENSIONS \*\*\*\*\*

0.1250 - 1/8 in.

.125 IN. PLATE (AREA= .36 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS		R	YP	YF	***** BEAM DIMENSIONS *****		SHEAR AREA
	WT/FT	ZPL				AREA	DEPTH	
9X 6X .375/.625	13.63	11.9	3.3	6.8	2.9	7.13	9.63	3.66
10X 5X .438/.563	13.80	14.8	3.7	6.9	3.8	7.19	10.56	4.68
10X 5X .438/.625	14.40	15.2	3.7	7.0	3.8	7.50	10.63	4.71
8X 6X .438/.688	14.65	11.1	2.9	6.2	2.6	7.63	8.69	3.86
9X 5X .438/.750	14.76	13.3	3.3	6.7	3.2	7.69	9.75	4.33
10X 6X .438/.563	14.88	15.3	3.7	7.1	3.6	7.75	10.56	4.68
10X 5X .438/.688	15.00	15.5	3.7	7.1	3.7	7.81	10.69	4.74
10X 6X .438/.625	15.61	15.6	3.6	7.3	3.5	8.13	10.63	4.71
9X 6X .438/.750	16.20	13.6	3.3	6.9	2.9	8.44	9.75	4.33
10X 6X .438/.688	16.32	15.9	3.6	7.4	3.4	8.50	10.69	4.74
9X 7X .438/.688	16.80	13.7	3.2	7.0	2.8	8.75	9.69	4.30
12X 5X .500/.563	16.92	21.8	4.3	7.8	4.9	8.81	12.56	6.34
10X 6X .438/.750	17.05	16.1	3.6	7.6	3.3	8.88	10.75	4.76
12X 5X .500/.625	17.53	22.2	4.3	8.0	4.8	9.13	12.63	6.38
10X 7X .438/.688	17.64	16.2	3.6	7.6	3.2	9.19	10.69	4.74
12X 6X .500/.563	18.01	22.4	4.3	8.1	4.6	9.38	12.56	6.34
12X 5X .500/.688	18.12	22.7	4.3	8.1	4.7	9.44	12.69	6.41
10X 7X .438/.750	18.49	16.4	3.6	7.8	3.1	9.63	10.75	4.76
12X 6X .500/.625	18.72	22.9	4.3	8.3	4.5	9.75	12.63	6.38
9X 8X .438/.750	19.08	14.1	4.0	8.3	2.6	9.94	9.75	4.33
12X 6X .500/.688	19.45	23.4	4.3	8.4	4.4	10.13	12.69	6.41
12X 5X .500/.875	19.93	23.9	4.4	8.5	4.5	10.38	12.88	6.50
12X 6X .500/.750	20.16	23.8	4.3	8.6	4.3	10.50	12.75	6.44
12X 7X .500/.688	20.76	23.9	4.3	8.7	4.2	10.81	12.69	6.41
12X 7X .500/.750	21.60	24.3	4.3	8.8	4.0	11.25	12.75	6.44
14X 6X .563/.625	22.33	32.1	5.0	9.2	5.6	11.63	14.63	8.31
12X 8X .500/.750	23.04	24.8	4.3	9.0	3.8	12.00	12.75	6.44
14X 6X .563/.688	23.04	32.8	5.0	9.4	5.4	12.00	14.69	8.34
12X 7X .500/.875	23.29	25.1	4.3	9.1	3.9	12.13	12.88	6.50
14X 6X .563/.750	23.77	33.3	5.0	9.5	5.3	12.38	14.75	8.37
14X 7X .563/.688	24.36	33.6	5.0	9.6	5.2	12.69	14.69	8.34
12X 8X .500/.875	24.96	25.5	4.2	9.3	3.7	13.00	12.88	6.50
14X 7X .563/.750	25.21	34.2	5.0	9.8	5.1	13.13	14.75	8.37
12X 7X .563/1.000	26.40	28.0	4.3	9.2	3.9	13.75	13.00	7.39
14X 8X .563/.750	26.65	34.3	5.0	10.1	4.8	13.88	14.75	8.37
14X 7X .563/.875	26.88	35.3	5.0	10.1	4.9	14.00	14.88	8.45
12X 8X .563/1.000	28.32	28.5	4.2	9.4	3.7	14.75	13.00	7.39
14X 8X .563/.875	28.57	36.0	4.9	10.4	4.6	14.88	14.88	8.45
14X 9X .563/.875	30.24	36.6	4.9	10.6	4.4	15.75	14.88	8.45
14X 8X .563/1.000	30.49	36.9	4.9	10.7	4.5	15.88	15.00	8.52
14X 7X .625/1.125	31.93	40.1	5.0	10.5	4.8	16.63	15.13	9.53
12X 10X .563/1.000	32.16	29.3	4.1	9.8	3.3	16.75	13.00	7.39
14X 9X .563/1.000	32.41	37.5	4.9	10.9	4.2	16.88	15.00	8.52
12X 9X .625/1.125	33.85	32.0	4.2	9.7	3.6	17.63	13.13	8.28
14X 8X .625/1.125	34.08	40.9	4.9	10.7	4.5	17.75	15.13	9.53

0.1250 - 1/8 in.



.125 IN. PLATE (AREA= .36 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X 7X .688/1.000T	34.56	52.6	99.8	589.9	5.7	11.2	5.9	18.00	17.00	.688	7.00	1.000	11.78
12X10X .625/1.125T	36.00	32.4	94.8	320.3	4.1	9.9	3.4	18.75	13.13	.625	10.00	1.125	8.28
16X 8X .688/1.000T	36.48	53.8	109.6	618.8	5.6	11.5	5.6	19.00	17.00	.688	8.00	1.250	11.95
16X 7X .688/1.250T	37.92	55.2	114.9	648.1	5.7	11.7	5.6	19.75	17.25	.688	7.00	1.250	11.78
16X 9X .688/1.000T	38.40	54.7	119.5	643.0	5.6	11.7	5.4	20.00	17.00	.688	9.00	1.000	11.78
18X 8X .750/.875T	39.36	68.3	120.6	828.8	6.3	12.1	6.9	20.50	18.88	.750	8.00	.875	14.25
14X 9X .688/1.250T	40.09	45.7	116.5	504.4	4.9	11.0	4.3	20.88	15.25	.688	9.00	1.250	10.58
16X10X .688/1.000T	40.32	55.6	129.2	665.8	5.6	12.0	5.2	21.00	17.00	.688	10.00	1.000	11.78
16X 9X .688/1.125T	40.57	56.1	128.9	674.6	5.6	12.0	5.2	21.13	17.13	.688	9.00	1.125	11.87
18X 9X .750/.875T	41.05	69.7	130.7	863.6	6.3	12.4	6.6	21.38	18.88	.750	9.00	.875	14.25
16X10X .688/1.125T	41.28	70.3	131.0	874.6	6.3	12.4	6.7	21.50	19.00	.750	8.00	1.000	14.34
16X11X .688/1.125T	42.72	56.9	139.7	697.9	5.6	12.3	5.0	22.25	17.13	.688	10.00	1.125	11.87
16X11X .688/1.125T	44.89	57.7	150.1	719.0	5.5	12.5	4.8	23.36	17.13	.688	11.00	1.125	11.87
18X 9X .750/1.000T	45.37	73.4	153.5	955.9	6.3	13.0	6.2	23.63	19.13	.750	9.00	1.125	14.44
18X10X .750/1.250T	49.92	76.2	178.0	1033.9	6.3	13.6	5.8	26.00	19.25	.750	10.00	1.250	14.53
18X12X .750/1.125T	51.84	76.6	190.0	1051.2	6.2	13.7	5.5	27.00	19.13	.750	12.00	1.125	14.44
18X11X .750/1.250T	52.32	77.2	191.4	1066.2	6.2	13.8	5.6	27.25	19.25	.750	11.00	1.250	14.53
21X 9X .875/1.125T	54.72	107.8	196.7	1549.7	7.3	14.4	7.9	28.50	22.13	.875	9.00	1.125	19.47
18X 9X .875/1.500T	56.16	88.0	192.1	1184.1	6.3	13.5	6.2	29.25	19.50	.875	9.00	1.500	17.17
21X10X .875/1.125T	56.89	109.8	211.4	1607.8	7.3	14.6	7.6	29.63	22.13	.875	10.00	1.125	19.47
21X 9X .875/1.375T	59.04	112.6	222.8	1693.4	7.4	15.0	7.6	30.75	22.38	.875	9.00	1.375	19.69
21X11X .875/1.125T	59.04	111.5	226.0	1661.7	7.3	14.9	7.4	30.75	22.13	.875	11.00	1.125	19.47
21X12X .875/1.125T	61.21	113.0	240.8	1711.8	7.3	15.1	7.1	31.88	22.13	.875	12.00	1.125	19.47
21X 9X .875/1.500T	61.21	114.8	235.6	1746.2	7.4	15.2	7.4	31.88	22.50	.875	9.00	1.500	19.80
21X10X .875/1.375T	61.69	114.5	240.4	1745.6	7.3	15.2	7.3	32.13	22.38	.875	10.00	1.375	19.69
21X10X .875/1.500T	64.09	116.6	254.7	1810.1	7.3	15.5	7.1	33.38	22.38	.875	10.00	1.500	19.80
21X11X .875/1.375T	64.32	116.2	257.7	1802.7	7.3	15.5	7.0	33.50	22.38	.875	11.00	1.375	19.69
21X11X .875/1.500T	66.97	118.4	273.1	1868.4	7.3	15.8	6.8	34.88	22.50	.875	11.00	1.500	19.80
24X10X1.000/1.125T	67.68	153.6	264.4	2453.9	8.3	16.0	9.3	35.25	25.13	1.000	10.00	1.125	25.26
21X13X .875/1.375T	69.60	119.1	292.1	1904.1	7.2	16.0	6.5	36.25	22.38	.875	13.00	1.375	19.69
24X11X1.000/1.125T	69.85	156.3	281.3	2536.8	8.3	16.2	9.0	36.38	25.13	1.000	11.00	1.125	25.26
21X12X .875/1.500T	69.85	119.9	291.8	1922.1	7.2	16.0	6.6	36.38	22.50	.875	12.00	1.500	19.80
24X12X1.000/1.125T	72.00	158.6	298.3	2614.9	8.3	16.5	8.8	37.50	25.13	1.000	12.00	1.125	25.26
21X14X .875/1.375T	72.25	120.4	308.7	1949.4	7.2	16.2	6.3	37.63	22.38	.875	14.00	1.375	19.69
24X10X1.000/1.375T	72.43	160.4	298.3	2660.4	8.4	16.6	8.9	37.75	25.38	1.000	10.00	1.375	25.51
21X13X .875/1.500T	72.73	121.2	309.8	1971.5	7.2	16.3	6.4	37.88	22.50	.875	13.00	1.500	19.80
24X10X1.000/1.500T	74.88	163.5	315.0	2757.9	8.4	16.9	8.8	39.00	25.50	1.000	10.00	1.500	25.63
24X11X1.000/1.375T	75.13	163.0	318.5	2750.4	8.3	16.9	8.6	39.13	25.38	1.000	11.00	1.375	25.51
24X14X .875/1.500T	75.61	122.4	328.0	2017.2	7.1	16.5	6.1	39.38	22.50	.875	14.00	1.500	19.80
24X11X1.000/1.500T	77.76	166.1	336.9	2850.6	8.4	17.2	8.5	40.50	25.50	1.000	11.00	1.500	25.63
21X15X .875/1.500T	78.49	123.6	345.8	2059.6	7.1	16.7	6.0	40.88	22.50	.875	15.00	1.500	19.80
24X10X1.000/1.750T	79.68	169.1	347.5	2943.1	8.4	17.4	8.5	41.50	25.75	1.000	10.00	1.750	25.88

0.1250 - 1/8 in.

-.125 IN. PLATE (AREA= .36 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	***** BEAM DIMENSIONS *****				SHEAR AREA		
		ZPL	ZFL				INERTIA	AREA	DEPTH	WEB THICK		FLANGE WIDTH	THICK
24X13X1.000/1.375T	80.41	167.4	359.2	8.3	17.4	8.1	2912.8	41.88	25.38	1.000	13.00	1.375	25.51
24X12X1.000/1.500T	80.64	168.4	358.6	8.3	17.4	8.2	2936.8	42.00	25.50	1.000	12.00	1.500	25.63
23X16X .875/1.500T	81.37	124.6	363.6	7.0	16.9	5.8	2099.1	42.38	22.50	.875	16.00	1.500	19.80
24X11X1.000/1.750T	83.04	171.7	372.3	8.3	17.7	8.2	3040.4	43.25	25.75	1.000	11.00	1.750	25.88
24X14X1.000/1.375T	83.04	169.4	379.2	8.3	17.6	7.9	2986.4	43.25	25.38	1.000	14.00	1.375	25.51
24X13X1.000/1.500T	83.52	170.5	380.7	8.3	17.7	7.9	3017.3	43.50	25.50	1.000	13.00	1.500	25.63
24X15X1.000/1.375T	85.69	171.2	398.7	9.2	17.8	7.7	3055.3	44.63	25.38	1.000	15.00	1.375	25.51
24X12X1.000/1.750T	86.40	174.0	397.1	8.3	18.0	7.9	3130.3	45.00	25.75	1.000	12.00	1.750	25.88
24X14X1.000/1.500T	86.40	172.4	402.0	8.3	17.9	7.7	3092.3	45.00	25.50	1.000	14.00	1.500	25.63
24X15X1.000/1.500T	89.28	174.2	423.4	8.2	18.2	7.5	3162.5	46.50	25.50	1.000	15.00	1.500	25.63
24X13X1.000/1.750T	89.76	176.0	421.7	8.3	18.3	7.6	3213.7	46.75	25.75	1.000	13.00	1.750	25.88
27X12X1.125/1.375T	90.01	223.2	411.0	9.3	18.5	10.0	4122.8	46.88	28.38	1.125	12.00	1.375	32.07
27X13X1.125/1.375T	92.64	226.2	434.4	9.3	18.7	9.8	4239.5	48.25	28.38	1.125	13.00	1.375	32.07
27X12X1.125/1.500T	92.89	227.3	434.0	9.4	18.8	9.8	4270.6	48.38	28.50	1.125	12.00	1.500	32.20
24X14X1.000/1.750T	93.12	178.0	445.5	8.2	18.5	7.4	3290.8	48.50	25.75	1.000	14.00	1.750	25.88
27X14X1.125/1.375T	95.29	229.1	457.0	9.3	19.0	9.5	4349.7	49.63	28.38	1.125	14.00	1.375	32.07
27X13X1.125/1.500T	95.77	230.4	459.0	9.3	19.1	9.6	4398.8	49.88	28.50	1.125	13.00	1.500	32.20
24X15X1.000/1.750T	96.48	179.6	470.1	8.2	18.7	7.2	3363.0	50.25	25.75	1.000	15.00	1.750	25.88
27X12X1.125/1.750T	98.65	235.0	478.6	9.4	19.4	9.5	4551.2	51.38	28.75	1.125	12.00	1.750	32.48
27X15X1.125/1.500T	101.53	235.9	508.3	9.3	19.6	9.1	4611.6	52.88	28.50	1.125	15.00	1.500	32.20
27X13X1.125/1.750T	102.01	238.0	507.2	9.4	19.7	9.2	4677.8	53.13	28.75	1.125	13.00	1.750	32.48
27X12X1.125/2.000T	104.41	242.0	521.5	9.4	19.9	9.2	4814.4	54.38	29.00	1.125	12.00	2.000	32.77
27X14X1.125/1.750T	105.37	240.8	535.3	9.3	19.9	9.0	4796.5	54.88	28.75	1.125	14.00	1.750	32.48
27X13X1.125/2.000T	108.25	245.0	553.3	9.3	20.2	8.9	4945.8	56.38	29.00	1.125	13.00	2.000	32.77
30X15X1.250/1.500T	115.20	309.0	603.1	10.3	20.9	10.7	6068.0	60.00	31.50	1.250	15.00	1.500	39.53
30X16X1.250/1.500T	118.08	312.4	630.9	10.3	21.2	10.5	6150.0	61.50	31.50	1.250	16.00	1.500	39.53
30X14X1.250/1.750T	119.04	315.7	633.4	10.4	21.3	10.6	6200.0	62.00	31.75	1.250	14.00	1.750	39.84
30X17X1.250/1.750T	129.12	325.7	728.6	10.3	22.0	9.8	7175.1	67.25	31.75	1.250	17.00	1.750	39.84
30X15X1.250/2.000T	129.60	328.5	726.0	10.3	22.1	10.0	7264.9	67.50	32.00	1.250	15.00	2.000	40.16
30X16X1.250/2.000T	133.44	331.7	761.7	10.3	22.4	9.7	7423.2	69.50	32.00	1.250	16.00	2.000	40.16
33X17X1.375/1.750T	144.25	416.6	848.9	11.4	23.4	11.5	9746.6	75.13	34.75	1.375	17.00	1.750	47.95
33X15X1.375/2.000T	144.73	419.7	846.7	11.4	23.5	11.6	9856.7	75.38	35.00	1.375	15.00	2.000	48.30
33X16X1.375/2.000T	148.57	424.3	866.4	11.4	23.8	11.4	10078.2	77.38	35.00	1.375	16.00	2.000	48.30
33X17X1.375/2.000T	152.41	428.4	892.6	11.4	24.0	11.1	10288.6	79.38	35.00	1.375	17.00	2.000	48.30
36X16X1.500/1.750T	157.44	515.9	941.5	12.4	24.5	13.4	12623.3	82.00	37.75	1.500	16.00	1.750	56.81
36X17X1.500/1.750T	160.80	521.6	980.0	12.4	24.7	13.2	12892.9	83.75	37.75	1.500	17.00	1.750	56.81
36X15X1.500/2.000T	161.28	525.0	978.2	12.4	24.8	13.3	13025.1	84.00	38.00	1.500	15.00	2.000	57.19
36X16X1.500/2.000T	165.12	531.0	1022.1	12.4	25.1	13.0	13322.3	86.00	38.00	1.500	16.00	2.000	57.19

0.1250 - 1/8 in.



\*\*\*\*\* BEAM DIMENSIONS \*\*\*\*\*

SECTION MODULUS										FLANGE				SHEAR AREA	
NOMINAL SIZE		WT/FT	ZPL	1FL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK		
3X 2X .125/ .180T	1.44	1.0	2.6	1.4	1.9	1.4	1.4	1.9	.75	3.19	.125	2.00	.180		
3X 2X .180/ .250T	2.04	1.9	3.1	1.4	1.6	1.6	1.6	1.8	1.06	3.25	.180	2.00	.250		
3X 2X .180/ .313T	2.28	2.0	3.5	1.4	1.7	1.7	1.7	1.7	1.19	3.31	.180	2.00	.313		
4X 2X .180/ .250T	2.40	2.7	2.5	5.7	1.8	2.1	2.1	2.3	1.25	4.25	.180	2.00	.250		
4X 2X .180/ .313T	2.65	2.8	2.9	6.3	1.8	2.3	2.3	2.2	1.38	4.31	.180	2.00	.313		
3X 3X .180/ .313T	2.88	2.1	2.8	4.2	1.4	2.0	2.0	1.5	1.50	3.31	.180	3.00	.313		
4X 3X .180/ .313T	3.24	2.9	3.9	7.4	1.8	2.5	2.5	1.9	1.69	4.31	.180	3.00	.313		
3X 3X .250/ .375T	3.61	2.3	3.3	4.8	1.4	2.1	2.1	1.5	1.88	3.38	.250	3.00	.375		
3X 3X .250/ .438T	3.96	2.4	3.6	5.1	1.4	2.2	2.2	1.4	2.06	3.44	.250	3.00	.438		
4X 3X .250/ .375T	4.09	3.2	4.5	8.6	1.8	2.6	2.6	1.9	2.13	4.38	.250	3.00	.375		
5X 3X .250/ .313T	4.20	4.1	5.2	12.6	2.1	3.0	3.0	2.3	2.19	5.31	.250	3.00	.313		
4X 3X .250/ .438T	4.44	3.3	5.0	9.1	1.8	2.8	2.8	1.8	2.31	4.44	.250	3.00	.438		
5X 3X .250/ .375T	4.57	4.3	5.8	13.6	2.2	3.2	3.2	2.3	2.38	5.38	.250	3.00	.375		
6X 3X .250/ .313T	4.68	5.2	6.4	18.7	2.5	3.6	3.6	2.9	2.44	6.31	.250	3.00	.313		
5X 3X .250/ .438T	4.92	4.4	6.5	14.7	2.2	3.3	3.3	2.3	2.56	5.44	.250	3.00	.438		
6X 3X .250/ .375T	5.05	5.4	7.2	20.2	2.5	3.7	3.7	2.8	2.63	6.38	.250	3.00	.375		
6X 3X .250/ .438T	5.40	5.6	8.0	21.6	2.5	3.9	3.9	2.7	2.81	6.44	.250	3.00	.438		
6X 4X .250/ .375T	5.76	5.6	8.9	22.4	2.5	4.0	4.0	2.5	3.00	6.38	.250	4.00	.375		
6X 4X .250/ .438T	6.24	5.7	9.9	24.0	2.5	4.2	4.2	2.4	3.25	6.44	.250	4.00	.438		
5X 4X .313/ .500T	6.84	5.0	9.0	18.1	2.1	3.6	3.6	2.0	3.56	5.50	.313	4.00	.500		
7X 4X .313/ .375T	7.08	7.5	11.0	33.6	2.8	4.5	4.5	3.1	3.69	7.38	.313	4.00	.375		
6X 4X .313/ .500T	7.45	6.4	11.2	27.0	2.5	4.2	4.2	2.4	3.88	6.50	.313	4.00	.500		
7X 4X .313/ .438T	7.56	7.7	12.2	35.8	2.8	4.7	4.7	2.9	3.94	7.44	.313	4.00	.438		
6X 4X .313/ .563T	7.93	6.5	12.1	28.4	2.5	4.4	4.4	2.4	4.13	6.56	.313	4.00	.563		
7X 4X .313/ .500T	8.04	7.9	13.4	38.0	2.8	4.8	4.8	2.8	4.19	7.50	.313	4.00	.500		
6X 5X .313/ .500T	8.41	6.5	13.2	29.1	2.4	4.5	4.5	2.2	4.38	6.50	.313	5.00	.500		
7X 4X .313/ .563T	8.52	8.1	14.5	40.0	2.8	5.0	5.0	2.8	4.44	7.56	.313	4.00	.563		
7X 5X .313/ .500T	9.00	8.1	15.8	41.0	2.8	5.1	5.1	2.6	4.69	7.50	.313	5.00	.500		
8X 4X .375/ .438T	9.12	10.1	14.8	51.6	3.1	5.1	5.1	3.5	4.75	8.44	.375	4.00	.438		
7X 5X .313/ .563T	9.60	8.3	17.2	43.1	2.8	5.2	5.2	2.5	5.00	7.56	.313	5.00	.563		
8X 4X .375/ .500T	9.60	10.3	16.1	54.6	3.1	5.3	5.3	3.4	5.00	8.50	.375	4.00	.500		
9X 4X .375/ .438T	9.85	12.0	17.2	67.9	3.5	5.7	5.7	3.9	5.13	9.44	.375	4.00	.438		
8X 4X .375/ .563T	10.08	10.6	17.4	57.3	3.1	5.4	5.4	3.3	5.25	8.56	.375	4.00	.563		
9X 4X .375/ .500T	10.33	12.3	18.3	71.7	3.5	5.8	5.8	3.8	5.38	9.50	.375	4.00	.500		
8X 4X .375/ .625T	10.56	10.8	18.6	60.0	3.1	5.6	5.6	3.2	5.50	8.63	.375	4.00	.625		
7X 6X .313/ .563T	10.58	8.4	19.7	45.6	2.7	5.4	5.4	2.3	5.56	7.56	.313	6.00	.563		
9X 4X .375/ .563T	10.81	12.6	20.1	75.2	3.5	6.0	6.0	3.7	5.63	9.56	.375	4.00	.563		
8X 5X .375/ .500T	11.16	10.9	20.5	62.1	3.1	5.7	5.7	3.0	5.81	8.56	.375	5.00	.563		
9X 5X .375/ .500T	11.29	12.7	21.8	77.5	3.5	6.1	6.1	3.6	5.88	9.50	.375	5.00	.500		
8X 5X .375/ .625T	11.77	11.1	21.9	64.9	3.1	5.8	5.8	3.0	6.13	8.63	.375	5.00	.625		
9X 5X .375/ .563T	11.88	13.0	23.6	81.4	3.5	6.3	6.3	3.5	6.19	9.56	.375	5.00	.563		
8X 6X .375/ .563T	12.25	11.2	23.5	66.0	3.1	5.9	5.9	2.8	6.38	8.56	.375	6.00	.563		
9X 6X .375/ .625T	12.48	13.2	25.2	85.0	3.5	6.4	6.4	3.4	6.50	9.63	.375	5.00	.625		
9X 6X .375/ .563T	12.96	13.3	27.0	86.6	3.4	6.5	6.5	3.2	6.75	9.56	.375	6.00	.563		
10X 5X .438/ .500T	13.21	16.2	25.7	105.8	3.8	6.5	6.5	4.1	6.88	10.50	.438	5.00	.500		

0.1563 - 5/32 in.

156 IN. PLATE (AREA = 56 SQ. IN.)

***** BEAM DIMENSIONS *****														
SECTION MODULUS														
NOMINAL SIZE		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK	SHEAR AREA
9X 6X	.375/.625T	13.69	13.5	29.0	90.3	3.4	6.7	3.1	7.13	9.63	.375	6.00	.625	3.67
10X 5X	.438/.563T	13.80	16.5	27.7	110.9	3.8	6.7	4.0	7.19	10.56	.438	5.00	.563	4.69
10X 5X	.438/.625T	14.40	16.9	29.5	115.8	3.8	6.9	3.9	7.50	10.63	.438	5.00	.625	4.72
8X 6X	.438/.688T	14.65	12.6	27.4	76.2	3.1	6.1	2.6	7.63	8.69	.438	6.00	.688	3.87
9X 5X	.438/.750T	14.76	14.9	29.2	97.8	3.4	6.6	3.3	7.69	9.75	.438	5.00	.750	4.34
10X 6X	.438/.563T	14.88	17.0	31.5	118.2	3.8	7.0	3.8	7.75	10.56	.438	6.00	.563	4.69
10X 5X	.438/.688T	15.00	17.2	31.4	120.5	3.8	7.0	3.8	7.81	10.69	.438	5.00	.688	4.75
10X 6X	.438/.750T	15.61	17.3	33.7	123.4	3.8	7.1	3.7	8.13	10.63	.438	6.00	.625	4.72
9X 6X	.438/.750T	16.20	15.3	33.5	103.8	3.4	6.8	3.1	8.44	9.75	.438	6.00	.750	4.34
10X 6X	.438/.688T	16.32	17.6	35.5	128.2	3.8	7.3	3.6	8.50	10.69	.438	6.00	.688	4.75
9X 7X	.438/.688T	16.80	15.3	35.5	105.3	3.4	6.9	3.0	8.75	9.69	.438	7.00	.688	4.31
12X 5X	.500/.563T	16.92	23.7	36.1	182.1	4.4	7.7	5.0	8.81	12.56	.500	5.00	.563	6.36
10X 6X	.438/.750T	17.05	17.9	38.2	133.0	3.8	7.4	3.5	8.88	10.75	.438	6.00	.750	4.78
12X 5X	.500/.625T	17.53	24.2	38.4	189.9	4.4	7.8	4.9	9.13	12.63	.500	5.00	.625	6.39
10X 7X	.438/.688T	17.64	18.0	40.4	135.0	3.7	7.5	3.3	9.19	10.69	.438	7.00	.688	4.75
12X 6X	.500/.563T	18.01	24.4	40.7	194.2	4.4	7.9	4.8	9.38	12.56	.500	6.00	.563	6.36
12X 5X	.500/.688T	18.12	24.7	40.7	197.4	4.4	8.0	4.9	9.44	12.69	.500	5.00	.688	6.42
10X 7X	.438/.750T	18.49	18.3	42.8	139.6	3.7	7.6	3.3	9.63	10.75	.438	7.00	.750	4.78
12X 6X	.500/.625T	18.72	24.9	43.4	202.6	4.4	8.1	4.7	9.75	12.63	.500	6.00	.625	6.39
9X 8X	.438/.750T	19.08	15.8	41.8	113.5	3.3	7.2	2.7	9.94	9.75	.438	8.00	.750	4.34
12X 6X	.500/.688T	19.45	25.4	46.1	210.4	4.4	8.3	4.6	10.13	12.69	.500	6.00	.688	6.42
12X 5X	.500/.875T	19.93	25.9	47.2	218.3	4.5	8.4	4.6	10.38	12.88	.500	5.00	.875	6.52
12X 6X	.500/.750T	20.16	25.8	48.0	218.1	4.4	8.4	4.5	10.50	12.75	.500	6.00	.750	6.45
12X 7X	.500/.688T	20.76	26.0	51.5	222.0	4.4	8.5	4.3	10.61	12.69	.500	7.00	.688	6.42
12X 7X	.500/.750T	21.60	26.4	54.7	229.9	4.4	8.7	4.2	11.25	12.75	.500	7.00	.750	6.45
14X 6X	.563/.625T	22.33	34.4	54.7	312.3	5.1	9.1	5.7	11.63	14.63	.563	6.00	.625	8.32
12X 8X	.500/.750T	23.04	26.9	60.5	240.3	4.4	8.9	4.0	12.00	12.75	.500	8.00	.750	6.45
14X 6X	.563/.688T	23.04	35.1	57.9	324.2	5.1	9.2	5.6	12.00	14.69	.563	6.00	.688	8.36
12X 7X	.500/.875T	23.29	27.2	60.5	244.7	4.4	9.0	4.0	12.13	12.88	.500	7.00	.875	6.52
14X 6X	.563/.750T	23.77	35.7	61.1	335.8	5.1	9.4	5.5	12.38	14.75	.563	6.00	.750	8.39
14X 7X	.563/.688T	24.36	35.9	64.4	342.3	5.1	9.5	5.3	12.69	14.69	.563	7.00	.688	8.36
12X 8X	.500/.875T	24.96	27.7	67.1	255.4	4.3	9.2	3.8	13.00	12.88	.500	8.00	.875	6.52
14X 7X	.563/.750T	25.21	36.6	68.0	354.4	5.1	9.7	5.2	13.13	14.75	.563	7.00	.750	8.39
12X 7X	.563/.000T	26.40	30.2	67.6	274.4	4.4	9.1	4.1	13.75	13.00	.563	7.00	1.000	7.41
14X 8X	.563/.750T	26.65	37.3	74.8	371.0	5.1	9.9	5.0	13.88	14.75	.563	8.00	.750	8.39
14X 7X	.563/.875T	26.88	37.7	75.0	377.2	5.1	10.0	5.0	14.00	14.88	.563	7.00	.875	8.47
12X 8X	.563/.000T	28.32	30.7	74.9	286.3	4.3	9.3	3.8	14.75	13.00	.563	8.00	1.060	7.41
14X 8X	.563/.875T	28.57	38.4	82.8	394.7	5.1	10.3	4.8	14.88	14.88	.563	8.00	.875	8.47
14X 9X	.563/.475T	30.24	39.0	90.5	410.2	5.0	10.5	4.5	15.75	14.88	.563	9.00	.875	8.47
14X 8X	.563/.000T	30.49	39.4	90.7	416.5	5.0	10.6	4.6	15.88	15.00	.563	8.00	1.000	8.53
14X 7X	.625/.125T	31.93	42.6	90.3	442.5	5.1	10.4	4.9	16.53	15.13	.625	7.00	1.125	9.55
12X 10X	.563/.000T	32.16	31.5	88.9	306.0	4.2	9.7	3.4	16.75	13.00	.563	10.00	1.000	7.41
14X 9X	.563/.000T	32.41	40.0	99.2	432.3	5.0	10.8	4.4	16.88	15.00	.563	9.00	1.000	8.53
12X 9X	.625/.125T	33.85	34.2	89.9	329.4	4.3	9.6	3.7	17.63	13.13	.625	9.00	1.125	8.30
14X 8X	.625/.125T	34.08	43.4	93.8	462.4	5.0	10.7	4.6	17.75	15.13	.625	8.00	1.125	9.55

0.1563 - 5/32 in.



.156 IN. PLATE (AREA= .56 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK			
16X 7X	.688/1.000T	34.56	55.3	101.9	615.0	5.8	11.1	6.0	18.00	17.00	.688	7.00	1.000	11.80		
12X10X	.625/1.125T	36.00	34.7	37.6	339.8	4.2	9.6	3.5	18.75	13.13	.625	10.00	1.125	8.30		
16X 8X	.688/1.000T	36.48	56.5	111.9	644.2	5.7	11.4	5.8	19.00	17.00	.688	8.00	1.000	11.80		
16X 7X	.688/1.250T	37.92	58.0	117.3	675.6	5.8	11.6	5.8	19.75	17.25	.688	7.00	1.250	11.98		
16X 9X	.688/1.000T	38.40	57.5	122.8	670.6	5.7	11.7	5.5	20.00	17.00	.688	9.00	1.000	11.80		
18X 8X	.750/ .875T	39.36	71.2	122.8	858.2	6.4	12.0	7.0	20.50	18.88	.750	8.00	.875	14.28		
14X 9X	.688/1.250T	40.09	48.2	119.3	528.8	5.0	11.0	4.4	20.88	15.25	.688	8.00	1.250	10.60		
16X10X	.688/1.000T	40.32	58.4	131.9	694.5	5.7	11.9	5.3	21.00	17.00	.688	18.00	1.000	11.80		
16X 9X	.688/1.125T	40.57	58.9	131.6	703.5	5.7	11.9	5.3	21.13	17.13	.688	9.00	1.125	11.89		
18X 9X	.750/ .875T	41.05	72.6	133.1	894.3	6.4	12.3	6.7	21.38	18.88	.750	9.00	.875	14.28		
18X 8X	.750/1.000T	41.28	73.2	133.3	905.5	6.4	12.4	6.8	21.50	19.00	.750	8.00	1.000	14.37		
16X10X	.688/1.125T	42.72	59.8	142.6	726.0	5.6	12.4	5.1	22.25	17.13	.688	18.00	1.125	11.89		
18X 9X	.750/1.125T	45.37	76.4	156.2	750.1	5.6	12.4	4.9	23.38	17.13	.688	11.00	1.125	11.89		
18X11X	.750/1.250T	49.69	78.8	181.0	1058.6	6.3	13.4	5.9	25.88	19.13	.750	9.00	1.125	14.46		
18X10X	.750/1.250T	49.92	79.3	181.2	1070.8	6.3	13.5	5.9	26.00	19.13	.750	11.00	1.250	14.46		
18X12X	.750/1.125T	51.84	79.8	193.3	1080.9	6.3	13.7	5.6	27.00	19.13	.750	12.00	1.125	14.46		
18X11X	.750/1.250T	52.32	80.4	194.7	1104.4	6.3	13.7	5.7	27.25	19.13	.750	11.00	1.250	14.55		
18X10X	.875/1.125T	56.72	111.2	199.4	1591.2	7.4	14.3	8.0	28.50	22.13	.875	9.00	1.125	19.50		
18X 9X	.875/1.500T	56.16	91.1	195.1	1220.4	6.4	13.4	6.3	29.25	19.50	.875	9.00	1.500	17.20		
22X10X	.875/1.125T	56.89	113.2	214.3	1650.8	7.4	14.6	7.7	29.63	22.13	.875	10.00	1.125	19.50		
22X10X	.875/1.375T	59.04	116.1	225.9	1728.3	7.4	14.9	7.7	30.75	22.38	.875	9.00	1.375	19.72		
22X11X	.875/1.125T	59.04	115.0	229.0	1706.2	7.4	14.8	7.4	30.75	22.13	.875	11.00	1.125	19.50		
22X12X	.875/1.125T	61.21	116.6	244.0	1767.8	7.4	15.1	7.2	31.88	22.13	.875	12.00	1.125	19.50		
21X 9X	.875/1.500T	61.21	118.3	238.8	1792.7	7.4	15.2	7.5	31.88	22.50	.875	9.00	1.500	19.82		
22X10X	.875/1.375T	61.69	118.0	243.7	1792.2	7.4	15.2	7.2	32.13	22.38	.875	10.00	1.375	19.72		
22X10X	.875/1.500T	64.09	120.2	258.2	1858.4	7.4	15.5	7.2	33.38	22.50	.875	10.00	1.500	19.82		
21X11X	.875/1.125T	64.32	119.8	261.1	1851.0	7.4	15.4	7.1	33.50	22.38	.875	11.00	1.375	19.72		
22X11X	.875/1.375T	66.97	122.0	276.8	1918.5	7.4	15.7	6.9	34.88	22.50	.875	11.00	1.500	19.82		
22X10X	.000/1.125T	67.60	157.4	267.3	2505.2	8.4	15.9	9.4	35.25	25.13	1.000	10.00	1.125	25.29		
22X11X	.875/1.375T	69.60	122.8	296.0	1955.5	7.3	15.9	6.6	36.25	22.38	.875	13.00	1.375	19.72		
22X11X	.000/1.125T	69.85	160.1	284.3	2589.8	8.4	16.2	9.1	36.38	25.13	1.000	11.00	1.125	25.29		
22X12X	.875/1.500T	69.85	123.5	295.7	1973.8	7.3	16.0	6.7	36.38	22.50	.875	12.00	1.500	19.82		
24X12X	.000/1.125T	72.00	162.5	301.5	2669.5	8.4	16.4	8.9	37.50	25.13	1.000	12.00	1.125	25.29		
22X10X	.875/1.375T	72.25	124.1	312.8	2002.1	7.2	16.1	6.4	37.63	22.38	.875	14.00	1.375	19.72		
22X11X	.000/1.375T	72.48	164.3	301.6	2715.7	8.4	16.5	9.0	37.75	25.38	1.000	10.00	1.375	25.54		
22X11X	.875/1.500T	72.73	124.9	313.9	2024.6	7.3	16.2	6.4	37.88	22.50	.875	13.00	1.500	19.82		
22X11X	.000/1.500T	74.88	167.4	318.4	2815.1	8.4	16.8	8.7	39.13	25.38	1.000	18.00	1.500	25.66		
24X11X	.000/1.375T	75.13	167.0	322.0	2807.6	8.4	16.8	8.7	39.13	25.38	1.000	11.00	1.375	25.54		
21X10X	.875/1.500T	75.61	126.1	332.4	2071.8	7.2	16.4	6.2	39.38	22.50	.875	14.00	1.500	19.82		
24X11X	.000/1.500T	77.76	170.1	340.5	2909.9	8.4	17.1	8.5	40.50	25.50	1.000	11.00	1.500	25.66		
21X15X	.875/1.500T	78.49	127.3	358.4	2115.4	7.1	16.6	6.0	40.88	22.50	.875	15.00	1.500	19.82		
44X10X	.000/1.750T	79.68	173.1	351.2	3004.0	8.1	17.4	8.6	41.50	25.75	1.000	17.50	1.750	25.91		

0.1563 - 5/32 in.

.156 IN. PLATE (AREA= .56 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA	
	WT/FT	ZPL	ZFL					INERTIA	WEB THICK	FLANGE WIDTH		THICK
24X13X1.000/1.375T	80.41	171.4	363.0	8.4	17.3	8.2	41.88	25.38	1.000	13.00	1.375	25.54
24X12X1.000/1.500T	80.64	172.4	362.4	8.4	17.4	8.3	42.00	25.50	1.000	12.00	1.500	25.66
21X16X .875/1.500T	81.37	128.3	368.5	7.1	16.8	5.9	42.38	22.50	.875	16.00	1.500	19.82
24X14X1.000/1.750T	83.04	175.8	376.3	8.4	17.7	8.2	43.25	25.75	1.000	11.00	1.750	25.91
24X14X1.000/1.375T	83.04	173.4	383.2	8.3	17.6	8.0	43.25	25.38	1.000	14.00	1.375	25.54
24X13X1.000/1.500T	83.52	174.5	384.7	8.4	17.6	8.0	43.50	25.50	1.000	13.00	1.500	25.66
24X15X1.000/1.375T	85.69	175.3	402.9	8.3	17.8	7.7	44.63	25.38	1.000	15.00	1.375	25.54
24X12X1.000/1.750T	86.40	178.1	403.3	8.4	17.9	8.0	45.00	25.75	1.000	12.00	1.750	25.91
24X14X1.000/1.500T	86.40	176.5	406.2	8.3	17.9	7.8	45.00	25.50	1.000	14.00	1.500	25.66
24X15X1.000/1.500T	89.28	178.3	427.8	8.3	18.1	7.5	46.50	25.50	1.000	15.00	1.500	25.66
24X13X1.000/1.750T	89.76	180.2	426.2	8.3	18.2	7.7	46.75	25.75	1.000	13.00	1.750	25.91
27X12X1.125/1.375T	90.01	227.5	414.6	9.4	18.4	10.1	46.88	28.38	1.125	12.00	1.375	32.10
27X13X1.125/1.375T	92.64	230.5	438.2	9.4	18.7	9.8	48.25	28.38	1.125	13.00	1.375	32.10
27X12X1.125/1.500T	92.89	231.7	437.8	9.4	18.7	9.9	48.38	28.50	1.125	12.00	1.500	32.24
24X14X1.000/1.750T	93.12	182.2	458.2	8.3	18.4	7.5	48.50	25.75	1.000	14.00	1.750	25.91
27X14X1.125/1.375T	95.29	233.5	461.0	9.4	18.9	9.6	49.63	28.38	1.125	14.00	1.375	32.10
27X13X1.125/1.500T	95.77	234.8	462.9	9.4	19.0	9.6	49.88	28.50	1.125	13.00	1.500	32.24
24X15X1.000/1.750T	96.48	183.8	475.0	8.2	18.7	7.2	50.25	25.75	1.000	15.00	1.750	25.91
27X12X1.125/1.750T	98.65	239.4	482.9	9.4	19.3	9.6	51.38	28.75	1.125	12.00	1.750	32.52
27X15X1.125/1.500T	101.53	240.3	512.6	9.4	19.5	9.1	52.88	28.50	1.125	15.00	1.500	32.24
27X13X1.125/1.750T	102.01	242.5	511.5	9.4	19.6	9.3	53.13	28.75	1.125	13.00	1.750	32.52
27X12X1.125/2.000T	104.41	246.5	526.0	9.4	19.9	9.3	54.38	29.00	1.125	12.00	2.000	32.80
27X14X1.125/1.750T	105.37	245.4	539.9	9.4	19.9	9.0	54.88	28.75	1.125	14.00	1.750	32.52
27X13X1.125/2.000T	108.25	249.6	558.0	9.4	20.1	9.0	56.38	29.00	1.125	13.00	2.000	32.80
30X15X1.250/1.500T	115.20	313.8	607.4	10.4	20.9	10.8	60.00	31.50	1.250	15.00	1.500	39.57
30X16X1.250/1.500T	118.08	317.2	635.4	10.4	21.1	10.5	61.50	31.50	1.250	16.00	1.500	39.57
30X14X1.250/1.750T	119.04	320.6	637.9	10.4	21.2	10.7	62.00	31.75	1.250	14.00	1.750	39.88
30X15X1.250/2.000T	129.12	330.7	733.7	10.4	22.0	9.9	67.25	31.75	1.250	17.00	1.750	39.88
30X16X1.250/2.000T	133.44	336.7	767.0	10.4	22.3	9.8	69.50	32.00	1.250	15.00	2.000	40.20
33X17X1.375/1.750T	144.25	421.9	851.6	11.4	23.4	11.5	75.13	34.75	1.375	17.00	1.750	48.00
33X15X1.375/2.000T	144.73	425.0	851.6	11.5	23.5	11.7	75.38	35.00	1.375	15.00	2.000	48.34
33X16X1.375/2.000T	148.57	429.6	891.6	11.4	23.7	11.4	77.38	35.00	1.375	16.00	2.000	48.34
33X17X1.375/2.000T	152.41	433.8	931.6	11.4	24.0	11.2	79.38	35.00	1.375	17.00	2.000	48.34
36X16X1.500/1.750T	157.44	521.5	946.3	12.4	24.4	13.5	82.00	37.75	1.500	16.00	1.750	56.86
36X17X1.500/1.750T	160.80	527.2	984.9	12.4	24.7	13.2	83.75	37.75	1.500	17.00	1.750	56.86
36X15X1.500/2.000T	161.28	530.6	983.1	12.5	24.8	13.4	84.00	38.00	1.500	15.00	2.000	57.23
36X16X1.500/2.000T	165.12	536.6	1027.2	12.5	25.1	13.1	86.00	38.00	1.500	16.00	2.000	57.23

0.1563 - 5/32 in.



100 IN. PLATE (AREA= .81 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				DIMENSIONS				BEAM		FLANGE		SHEAR	
3X 2X	125/ .180I	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
3X 2X	125/ .180I	1.44	2.4	1.4	3.0	1.4	1.2	2.1	.75	3.19	.125	2.00	.180	.42	.42
3X 2X	180/ .250I	2.04	2.5	1.8	3.6	1.4	1.4	2.0	1.06	3.25	.180	2.00	.250	.65	.65
3X 2X	180/ .313I	2.28	2.6	2.1	4.1	1.4	1.6	1.9	1.13	3.31	.180	2.00	.313	.66	.66
4X 2X	180/ .250I	2.40	3.5	2.6	6.7	1.8	1.9	2.6	1.25	4.25	.180	2.00	.250	.83	.83
4X 2X	180/ .313I	2.65	3.7	3.0	7.4	1.8	2.0	2.5	1.38	4.31	.180	2.00	.313	.85	.85
3X 3X	180/ .313I	2.88	2.8	3.0	5.0	1.5	1.8	1.7	1.50	3.31	.180	3.00	.313	.66	.66
4X 3X	180/ .313I	3.24	3.8	4.1	8.8	1.9	2.3	2.2	1.69	4.31	.180	3.00	.313	.85	.85
3X 3X	250/ .375I	3.61	3.0	3.5	5.7	1.5	1.9	1.7	1.88	3.38	.250	3.00	.375	.89	.89
3X 3X	250/ .438I	3.96	3.1	3.8	6.2	1.5	2.0	1.6	2.06	3.44	.250	3.00	.438	.91	.91
4X 3X	250/ .375I	4.09	4.1	4.8	10.1	1.9	2.5	2.1	2.13	4.38	.250	3.00	.375	1.14	1.14
5X 3X	250/ .313I	4.20	5.2	5.5	14.6	2.2	2.8	2.7	2.19	5.31	.250	3.00	.313	1.37	1.37
4X 3X	250/ .438I	4.44	4.2	5.3	10.8	1.9	2.6	2.0	2.31	4.44	.250	3.00	.438	1.16	1.16
5X 3X	250/ .375I	4.57	5.3	6.1	15.9	2.2	3.0	2.6	2.38	5.38	.250	3.00	.375	1.39	1.39
6X 3X	250/ .313I	4.68	6.5	6.8	21.6	2.6	3.3	3.2	2.44	6.31	.250	3.00	.313	1.62	1.62
5X 3X	250/ .438I	4.92	5.5	6.8	17.2	2.3	3.1	2.5	2.56	5.44	.250	3.00	.438	1.41	1.41
6X 3X	250/ .375I	5.05	6.6	7.6	23.3	2.6	3.5	3.1	2.63	6.38	.250	3.00	.375	1.64	1.64
6X 3X	250/ .438I	5.40	6.8	8.4	25.1	2.6	3.7	3.0	2.81	6.44	.250	3.00	.438	1.66	1.66
6X 4X	250/ .375I	5.76	6.9	9.4	26.1	2.6	3.8	2.8	3.00	6.38	.250	4.00	.375	1.64	1.64
6X 4X	250/ .438I	6.24	7.1	10.5	28.0	2.6	4.0	2.7	3.25	6.44	.250	4.00	.438	1.66	1.66
5X 4X	313/ .500I	6.84	6.1	9.5	21.2	2.2	3.5	2.2	3.56	5.50	.313	4.00	.500	1.78	1.78
7X 4X	313/ .375I	7.08	8.9	11.6	38.2	2.9	4.3	3.3	3.69	7.38	.313	4.00	.375	2.37	2.37
6X 4X	313/ .500I	7.45	7.7	11.8	31.2	2.6	4.0	2.6	3.88	6.50	.313	4.00	.500	2.09	2.09
7X 4X	313/ .438I	7.56	9.2	12.8	40.9	2.9	4.4	3.2	3.94	7.44	.313	4.00	.438	2.39	2.39
6X 4X	313/ .563I	7.93	7.9	12.8	32.8	2.6	4.2	2.6	4.13	6.56	.313	4.00	.563	2.11	2.11
7X 4X	313/ .500I	8.04	9.4	14.1	43.3	2.9	4.6	3.1	4.19	7.50	.313	4.00	.500	2.41	2.41
6X 5X	313/ .500I	8.41	7.9	14.0	33.8	2.6	4.3	2.4	4.38	6.50	.313	5.00	.500	2.09	2.09
7X 4X	313/ .563I	8.52	9.6	15.3	45.7	3.0	4.8	3.0	4.44	7.56	.313	4.00	.563	2.42	2.42
7X 5X	313/ .500I	9.00	9.7	16.6	47.0	2.9	4.9	2.8	4.69	7.50	.313	5.00	.500	2.41	2.41
8X 4X	375/ .438I	9.12	11.7	15.6	57.7	3.2	4.9	3.7	4.75	8.44	.375	4.00	.438	3.24	3.24
7X 5X	313/ .563I	9.60	9.8	18.1	49.4	2.9	5.0	2.7	5.00	7.56	.313	5.00	.563	2.42	2.42
8X 4X	375/ .500I	9.60	12.0	16.9	61.1	3.2	5.1	3.6	5.00	8.50	.375	4.00	.500	3.26	3.26
9X 4X	375/ .438I	9.85	13.8	18.1	75.4	3.6	5.5	4.2	5.13	9.44	.375	4.00	.438	3.61	3.61
8X 4X	375/ .563I	10.08	12.3	18.2	64.2	3.3	5.2	3.5	5.25	8.56	.375	4.00	.563	3.28	3.28
9X 4X	375/ .500I	10.33	14.2	19.6	79.7	3.6	5.6	4.1	5.38	9.50	.375	4.00	.500	3.63	3.63
8X 4X	375/ .625I	10.56	12.5	19.5	67.2	3.3	5.4	3.4	5.50	8.63	.375	4.00	.625	3.31	3.31
7X 6X	313/ .563I	10.68	10.0	20.8	52.4	2.9	5.2	2.5	5.56	7.56	.313	6.00	.563	2.42	2.42
9X 4X	375/ .563I	10.81	14.5	21.1	83.6	3.6	5.8	4.0	5.63	9.56	.375	5.00	.563	3.66	3.66
8X 5X	375/ .500I	11.16	12.7	21.5	69.7	3.2	5.5	3.2	5.81	8.56	.375	5.00	.563	3.28	3.28
9X 5X	375/ .625I	11.29	14.6	22.8	86.3	3.6	5.9	3.8	5.88	9.50	.375	5.00	.500	3.63	3.63
8X 5X	375/ .500I	11.77	12.9	23.0	72.9	3.2	5.7	3.2	6.13	8.63	.375	5.00	.625	3.31	3.31
9X 5X	375/ .563I	11.88	14.9	24.7	90.6	3.6	6.1	3.7	6.19	9.56	.375	5.00	.563	3.66	3.66
8X 6X	375/ .563I	12.25	12.9	24.7	74.3	3.2	5.7	3.0	6.38	8.56	.375	6.00	.563	3.28	3.28
9X 5X	375/ .625I	12.48	15.2	26.4	94.8	3.6	6.2	3.6	6.50	9.63	.375	5.00	.625	3.68	3.68
9X 6X	375/ .563I	12.96	15.3	28.3	96.6	3.6	6.3	3.4	6.75	9.56	.375	6.00	.563	3.66	3.66
10X 5X	438/ .500I	13.21	18.2	26.8	115.9	3.9	6.4	4.3	6.88	10.50	.438	5.00	.500	4.68	4.68

0.1875 - 3/16 in.

.188 IN. PLATE (AREA= .81 SQ.IN.)

***** BEAM DIMENSIONS *****													
NOMINAL SIZE	SECTION MODULUS			INERTIA	R	YP	VF	AREA	DEPTH	WEB		THICK	
	WT/FT	ZPL	ZFL							WIDTH	FLANGE		
9X 6X .375/.625T	13.69	15.5	30.3	100.9	3.6	6.5	3.3	7.13	9.63	.375	6.00	.625	3.68
10X 5X .438/.563T	13.80	16.6	28.9	121.6	3.9	6.5	4.2	7.19	10.56	.438	5.00	.563	4.71
10X 5X .438/.625T	14.40	19.0	30.7	126.9	3.9	6.7	4.1	7.50	10.63	.438	5.00	.625	4.74
8X 6X .438/.688T	14.65	14.4	28.7	85.0	3.2	5.9	3.0	7.63	8.69	.438	6.00	.688	3.89
9X 5X .438/.750T	14.76	16.9	30.6	108.0	3.6	6.4	3.5	7.69	9.75	.438	5.00	.750	4.35
10X 6X .438/.563T	14.88	19.1	32.8	129.7	3.9	6.8	4.0	7.75	10.56	.438	6.00	.563	4.71
10X 5X .438/.688T	15.00	19.3	32.7	132.2	3.9	6.8	4.0	7.81	10.69	.438	5.00	.688	4.76
10X 6X .438/.625T	15.61	19.5	35.1	135.5	3.9	7.0	3.9	8.13	10.63	.438	6.00	.625	4.74
9X 6X .438/.750T	16.20	17.3	35.0	114.9	3.5	6.7	3.3	8.44	9.75	.438	6.00	.750	4.35
10X 6X .438/.688T	16.32	19.8	37.4	140.8	3.9	7.1	3.8	8.50	10.69	.438	6.00	.688	4.76
9X 7X .438/.688T	16.80	17.3	37.1	116.5	3.5	6.7	3.1	8.75	9.69	.438	7.00	.688	4.33
12X 5X .500/.563T	16.92	26.1	37.4	196.1	4.5	7.5	5.2	8.81	12.56	.500	5.00	.563	6.37
10X 6X .438/.750T	17.05	20.1	39.8	146.2	3.9	7.3	3.7	8.88	10.75	.438	6.00	.750	4.79
12X 5X .500/.625T	17.53	26.7	39.8	204.6	4.5	7.7	5.1	9.13	12.63	.500	5.00	.625	6.41
10X 7X .438/.688T	17.64	20.2	42.1	148.4	3.9	7.3	3.5	9.19	10.69	.438	7.00	.688	4.76
12X 6X .500/.563T	18.01	26.9	42.2	209.3	4.5	7.8	5.0	9.38	12.56	.500	6.00	.563	6.37
12X 5X .500/.688T	18.12	27.1	42.2	212.7	4.6	7.8	5.0	9.44	12.69	.500	5.00	.688	6.44
10X 7X .438/.750T	18.49	20.5	44.6	153.6	3.8	7.5	3.4	9.63	10.75	.438	7.00	.750	4.79
12X 6X .500/.625T	18.72	27.4	45.0	218.4	4.5	8.0	4.9	9.75	12.63	.500	6.00	.625	6.41
9X 8X .438/.750T	19.08	17.8	43.7	125.8	3.4	7.1	2.9	9.94	9.75	.438	8.00	.750	4.35
12X 6X .500/.688T	19.45	27.9	47.7	226.8	4.6	8.1	4.8	10.13	12.69	.500	6.00	.688	6.44
12X 5X .500/.875T	19.93	28.5	48.9	235.2	4.6	8.3	4.8	10.38	12.88	.500	5.00	.875	6.53
12X 6X .500/.750T	20.16	28.4	58.6	235.2	4.6	8.3	4.7	10.50	12.75	.500	6.00	.750	6.47
12X 7X .500/.688T	20.76	28.6	53.3	239.5	4.5	8.4	4.5	10.81	12.69	.500	7.00	.688	6.44
12X 7X .500/.750T	21.60	29.0	56.7	248.1	4.5	8.6	4.4	11.25	12.75	.500	7.00	.750	6.47
14X 6X .563/.625T	22.33	37.2	56.4	332.2	5.2	8.9	5.9	11.63	14.63	.563	6.00	.625	8.34
12X 8X .500/.750T	23.04	29.5	62.6	259.5	4.5	8.8	4.1	12.00	12.75	.500	8.00	.750	6.47
14X 6X .563/.688T	23.04	37.9	59.7	344.8	5.2	9.1	5.8	12.00	14.69	.563	6.00	.688	8.38
12X 7X .500/.875T	23.23	29.8	62.7	264.2	4.5	8.9	4.2	12.13	12.88	.500	7.00	.875	6.53
14X 6X .563/.750T	23.77	38.5	63.0	357.1	5.2	9.3	5.7	12.38	14.75	.563	6.00	.750	8.41
14X 7X .563/.688T	24.36	38.8	66.3	364.2	5.2	9.4	5.5	12.69	14.69	.563	7.00	.688	8.38
12X 8X .500/.875T	24.96	30.3	69.5	275.9	4.5	9.1	4.0	13.00	12.88	.500	8.00	.875	6.53
14X 7X .563/.750T	25.21	39.5	70.0	377.0	5.2	9.6	5.4	13.13	14.75	.563	7.00	.750	8.41
12X 7X .563/.625T	26.40	32.8	69.9	294.3	4.5	9.0	4.2	13.75	13.00	.563	7.00	.625	7.42
14X 8X .563/.750T	26.65	40.2	77.0	394.9	5.2	9.8	5.1	13.88	14.75	.563	8.00	.750	8.41
14X 7X .563/.875T	26.88	40.7	77.3	401.4	5.2	9.9	5.2	14.00	14.88	.563	7.00	.875	8.48
12X 8X .563/.625T	28.32	33.3	77.4	307.3	4.4	9.2	4.0	14.75	13.00	.563	8.00	.625	7.42
14X 8X .563/.750T	28.57	41.4	85.3	420.2	5.2	10.1	4.9	14.88	14.88	.563	8.00	.750	8.48
14X 9X .563/.875T	30.24	42.1	93.2	436.8	5.1	10.4	4.7	15.75	14.88	.563	9.00	.875	8.48
14X 8X .563/.625T	30.49	42.5	93.4	443.5	5.2	10.4	4.7	15.88	15.00	.563	8.00	.625	8.55
12X 10X .563/.1.000T	31.93	45.6	92.9	468.7	5.2	10.3	5.0	16.63	15.13	.625	7.00	1.125	9.57
12X 10X .563/.1.000T	32.16	34.2	91.9	328.6	4.3	9.6	3.6	16.75	13.00	.563	10.00	1.000	7.42
14X 9X .563/.1.000T	32.41	43.1	102.2	460.6	5.1	10.7	4.5	16.88	15.00	.563	9.00	1.000	8.55
12X 9X .625/.1.125T	33.85	36.9	92.8	351.8	4.4	9.5	3.8	17.63	13.13	.625	9.00	1.125	8.32
14X 8X .625/.1.125T	34.08	46.5	102.6	489.9	5.1	10.5	4.8	17.75	15.13	.625	8.00	1.125	9.57

0.1875 - 3/16 in.



.188 IN. PLATE (AREA= .81 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	AREA			
16X 7X .688/1.000T	34.56	58.6	104.4	644.9	5.9	11.0	6.2	18.00	17.00	.688	7.00	1.000	11.83			
12X10X .625/1.125T	36.00	37.4	100.7	363.0	4.3	9.7	3.6	18.75	13.13	.625	10.00	1.125	8.32			
16X 8X .688/1.000T	36.48	59.8	114.6	675.7	5.8	11.3	5.9	19.00	17.00	.688	8.00	1.000	11.83			
16X 7X .688/1.250T	37.92	61.4	120.1	708.6	5.9	11.5	5.9	19.75	17.25	.688	7.00	1.250	12.00			
16X 9X .688/1.000T	38.40	60.9	124.9	703.6	5.8	11.6	5.6	20.00	17.00	.688	9.00	1.000	11.83			
18X 8X .750/.875T	39.36	74.8	125.4	893.5	6.5	11.9	7.1	20.50	18.88	.750	8.00	.875	14.30			
14X 9X .688/1.250T	40.09	51.3	122.4	558.0	5.1	10.9	4.6	20.88	15.25	.688	9.00	1.250	10.62			
16X10X .688/1.000T	40.32	61.8	135.0	728.8	5.8	11.8	5.4	21.00	17.00	.688	10.00	1.000	11.83			
16X 9X .688/1.125T	40.57	62.3	134.7	738.1	5.8	11.8	5.5	21.13	17.13	.688	9.00	1.125	11.91			
18X 9X .750/.875T	41.05	76.3	135.0	931.2	6.5	12.2	6.9	21.38	18.88	.750	9.00	.875	14.33			
18X 8X .750/1.000T	41.28	76.9	136.1	942.7	6.5	12.3	6.9	21.50	19.00	.750	8.00	1.000	14.39			
16X10X .688/1.125T	42.72	63.2	145.9	764.0	5.8	12.1	5.2	22.25	17.13	.688	10.00	1.125	11.91			
16X11X .688/1.125T	44.89	64.0	156.8	787.5	5.7	12.3	5.0	23.38	17.13	.688	11.00	1.125	14.49			
18X 9X .750/1.125T	45.37	80.2	159.4	1030.7	6.5	12.9	6.5	23.63	19.13	.750	9.00	1.125	14.49			
18X11X .750/1.000T	47.04	80.7	170.9	1052.2	6.4	13.0	6.2	24.50	19.00	.750	11.00	1.000	14.39			
18X 9X .750/1.250T	47.52	81.9	171.0	1076.6	6.5	13.1	6.3	24.75	19.25	.750	9.00	1.250	14.58			
18X11X .750/1.125T	49.69	82.6	184.6	1102.6	6.4	13.3	6.0	25.88	19.13	.750	11.00	1.125	14.49			
18X10X .750/1.250T	49.92	83.2	184.8	1115.1	6.4	13.4	6.0	26.00	19.25	.750	10.00	1.250	14.49			
18X12X .750/1.125T	51.84	83.6	197.2	1134.3	6.4	13.6	5.8	27.00	19.13	.750	12.00	1.125	14.49			
18X11X .750/1.250T	52.32	84.3	198.6	1150.3	6.4	13.6	5.8	27.25	19.25	.750	11.00	1.250	14.58			
21X 9X .875/1.125T	54.72	115.4	202.6	1641.1	7.5	14.2	8.1	28.50	22.13	.875	9.00	1.125	19.53			
18X 9X .875/1.500T	56.16	94.9	198.6	1264.2	6.5	13.3	6.4	29.25	19.50	.875	9.00	1.500	17.23			
21X10X .875/1.125T	56.89	117.5	217.6	1702.7	7.5	14.5	7.8	29.63	22.13	.875	10.00	1.125	19.53			
21X 9X .875/1.375T	59.04	120.4	229.5	1782.3	7.5	14.8	7.8	30.75	22.38	.875	9.00	1.375	19.75			
22X11X .875/1.125T	59.04	119.3	232.6	1758.9	7.5	14.8	7.6	30.75	22.13	.875	11.00	1.125	19.53			
22X11X .875/1.125T	61.21	120.9	247.8	1813.3	7.4	15.0	7.3	31.88	22.13	.875	12.00	1.125	19.53			
21X 9X .875/1.500T	61.21	122.7	242.6	1848.7	7.5	15.1	7.6	31.88	22.50	.875	9.00	1.500	19.85			
22X10X .875/1.375T	61.69	122.4	247.5	1848.5	7.5	15.1	7.5	32.13	22.38	.875	10.00	1.375	19.75			
22X10X .875/1.500T	64.09	124.6	262.2	1916.8	7.5	15.4	7.3	33.38	22.50	.875	10.00	1.500	19.85			
22X11X .875/1.375T	64.32	124.2	265.2	1909.2	7.5	15.4	7.2	33.50	22.38	.875	11.00	1.375	19.75			
22X11X .875/1.500T	66.97	126.5	281.1	1978.8	7.4	15.6	7.0	34.88	22.50	.875	11.00	1.500	19.85			
24X10X1.000/1.125T	67.68	162.1	270.7	2567.0	8.4	15.8	9.5	35.25	25.13	1.000	10.00	1.125	25.32			
22X13X .875/1.375T	69.60	127.2	300.6	2017.5	7.4	15.9	6.7	36.25	22.38	.875	13.00	1.375	19.75			
24X11X1.000/1.125T	69.85	164.8	288.0	2653.7	8.4	16.1	9.2	36.38	25.13	1.000	11.00	1.125	25.32			
22X12X .875/1.500T	69.85	128.0	300.3	2036.2	7.4	15.9	6.8	36.38	22.50	.875	12.00	1.500	19.85			
24X12X1.000/1.125T	72.00	167.2	305.3	2735.5	8.5	16.4	9.0	37.50	25.13	1.000	12.00	1.125	25.32			
22X14X .875/1.125T	72.25	128.6	317.6	2065.7	7.3	16.1	6.5	37.63	22.38	.875	14.00	1.375	19.75			
24X10X1.000/1.375T	72.48	169.1	305.4	2782.4	8.5	16.5	9.1	37.75	25.38	1.000	10.00	1.375	25.57			
22X13X .875/1.500T	72.73	129.5	318.8	2088.8	7.3	16.1	6.6	37.88	22.50	.875	13.00	1.500	19.85			
24X10X1.000/1.500T	74.88	172.3	322.4	2884.2	8.5	16.7	8.9	39.00	25.38	1.000	10.00	1.500	25.69			
24X11X1.000/1.375T	75.13	171.9	326.0	2876.7	8.5	16.7	8.8	39.13	25.38	1.000	11.00	1.375	25.57			
22X14X .875/1.500T	75.51	130.7	337.5	2137.7	7.3	16.4	6.3	39.38	22.50	.875	14.00	1.500	19.85			
24X11X1.000/1.500T	77.76	175.0	344.7	2981.4	8.5	17.0	8.6	40.50	25.50	1.000	11.00	1.500	25.69			
22X15X .875/1.500T	78.49	131.9	355.8	2183.0	7.2	16.6	6.1	40.88	22.50	.875	15.00	1.500	19.85			
24X10X1.000/1.750T	79.69	178.1	355.6	3077.7	8.5	17.3	8.7	41.50	25.75	1.000	10.00	1.750	25.94			

0.1875 - 3/16 in.

188 IN. PLATE (AREA= .81 SQ.IN.)

***** BEAM DIMENSIONS *****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													

0.1875 - 3/16 in.



SECTION			MODULUS			INERTIA			R			Y P			V F			AREA			DEPTH			THICK			WEB			DIMENSIONS			*****								
NOMINAL SIZE			WT/FT			IPL			ZFL			INERTIA			R			Y P			V F			AREA			DEPTH			THICK			WEB			DIMENSIONS			*****		
3X 2X .125/ .100T			1.44			3.1			1.5			3.4			1.4			1.1			2.3			.75			3.19			.125			2.00			1.00					
3X 2X .180/ .250T			2.04			3.3			1.9			4.1			1.4			1.3			2.2			1.06			3.25			.180			2.00			.250					
3X 2X .100/ .313T			2.20			3.4			2.2			4.7			1.4			1.4			2.1			1.13			3.31			.100			2.00			.313					
4X 2X .180/ .250T			2.40			4.5			2.7			7.5			1.8			1.7			2.8			1.19			4.25			.180			2.00			.250					
4X 2X .100/ .313T			2.65			4.6			3.1			8.4			1.8			1.8			2.7			1.38			4.31			.100			2.00			.313					
3X 3X .180/ .313T			2.80			3.6			3.1			5.9			1.5			1.6			1.9			1.30			4.31			.180			3.00			.313					
4X 3X .180/ .313T			3.24			4.8			4.2			10.2			1.9			2.1			2.4			1.69			4.31			.180			3.00			.313					
3X 3X .250/ .375T			3.61			3.8			3.6			6.7			1.5			1.8			1.8			1.88			3.30			.250			3.00			.375					
3X 3X .250/ .430T			3.96			3.9			4.0			7.2			1.5			1.9			1.8			2.06			3.44			.250			3.00			.430					
4X 3X .250/ .375T			4.09			5.2			5.0			11.7			1.9			2.3			2.3			2.13			4.30			.250			3.00			.375					
5X 3X .250/ .313T			4.20			6.4			5.7			16.7			2.3			2.6			2.9			2.19			5.31			.250			3.00			.313					
4X 3X .250/ .430T			4.44			5.3			5.5			12.6			1.9			2.4			2.8			2.31			4.44			.250			3.00			.430					
5X 3X .250/ .375T			4.57			6.6			6.4			18.2			2.3			2.8			2.8			2.38			5.30			.250			3.00			.375					
6X 3X .250/ .313T			4.68			7.9			7.1			24.5			2.6			3.1			3.4			2.44			6.31			.250			3.00			.313					
6X 3X .250/ .430T			4.92			8.0			7.2			19.7			2.3			2.9			3.3			2.56			5.44			.250			3.00			.430					
6X 3X .250/ .375T			5.05			8.1			8.0			26.6			2.7			3.3			3.3			2.63			6.30			.250			3.00			.375					
6X 3X .250/ .430T			5.40			8.4			8.8			28.6			2.7			3.4			3.2			2.81			6.44			.250			3.00			.430					
6X 4X .250/ .375T			5.76			8.6			9.8			29.9			2.7			3.5			3.1			3.00			6.30			.250			4.00			.375					
6X 4X .250/ .430T			6.24			8.6			11.0			32.2			2.7			3.7			2.9			3.25			6.44			.250			4.00			.430					
5X 4X .313/ .500T			6.84			7.4			10.0			24.4			2.3			3.3			2.4			3.56			5.50			.313			4.00			.500					
6X 4X .313/ .500T			7.08			7.4			10.7			12.1			3.0			4.0			3.6			3.69			7.30			.313			4.00			.375					
7X 4X .313/ .500T			7.45			9.3			12.4			13.4			3.0			4.2			3.9			3.94			7.44			.313			4.00			.500					
7X 4X .313/ .563T			7.56			9.4			13.4			13.4			3.0			4.0			3.8			4.13			6.56			.313			4.00			.563					
6X 4X .313/																																									

0.2188 - 7/32 in.

0.219 IN. PLATE (AREA= 1.10 SQ.IN.)

***** BEAM *****													
***** DIMENSIONS *****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													
*****													

0.2188 - 7/32 in.



•219 IN. PLATE (AREA= 1.10 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK
16X 7X .688/1.000T	34.56	62.5	107.1	679.6	6.0	10.9	6.3 10.00	17.00	.688	7.00	1.000	.688	7.00	1.000	.688	7.00	1.000	.688	7.00	1.000	.688	7.00	1.000
12X10X .625/1.125T	36.00	40.6	104.1	390.0	4.4	9.6	3.7 18.75	13.13	.625	10.00	1.125	.625	10.00	1.125	.625	10.00	1.125	.625	10.00	1.125	.625	10.00	1.125
16X 8X .688/1.000T	36.48	63.8	117.5	712.2	6.0	11.2	6.1 19.00	17.00	.688	8.00	1.000	.688	8.00	1.000	.688	8.00	1.000	.688	8.00	1.000	.688	8.00	1.000
16X 7X .688/1.250T	37.92	65.5	123.2	746.7	6.0	11.4	6.1 19.75	17.25	.688	7.00	1.250	.688	7.00	1.250	.688	7.00	1.250	.688	7.00	1.250	.688	7.00	1.250
16X 9X .688/1.000T	39.40	64.9	128.1	741.9	5.9	11.4	5.8 20.00	17.00	.688	9.00	1.000	.688	9.00	1.000	.688	9.00	1.000	.688	9.00	1.000	.688	9.00	1.000
18X 8X .750/.875T	39.36	79.1	128.2	934.4	6.6	11.8	7.3 20.50	18.88	.750	8.00	.875	.750	8.00	.875	.750	8.00	.875	.750	8.00	.875	.750	8.00	.875
14X 9X .688/1.250T	40.09	55.0	125.9	592.0	5.2	10.8	4.7 20.00	15.25	.688	9.00	1.250	.688	9.00	1.250	.688	9.00	1.250	.688	9.00	1.250	.688	9.00	1.250
15X10X .688/1.000T	40.32	65.9	138.4	768.7	5.9	11.7	5.6 21.00	17.00	.688	10.00	1.000	.688	10.00	1.000	.688	10.00	1.000	.688	10.00	1.000	.688	10.00	1.000
16X 9X .688/1.125T	40.57	66.4	138.1	778.3	5.9	11.7	5.6 21.13	17.13	.688	9.00	1.125	.688	9.00	1.125	.688	9.00	1.125	.688	9.00	1.125	.688	9.00	1.125
18X 9X .750/.875T	41.05	80.6	138.8	974.0	6.6	12.1	7.1 21.50	19.00	.750	8.00	1.000	.750	8.00	1.000	.750	8.00	1.000	.750	8.00	1.000	.750	8.00	1.000
18X 8X .750/1.000T	41.28	81.3	139.1	985.8	6.6	12.1	5.4 22.25	17.13	.688	10.00	1.125	.688	10.00	1.125	.688	10.00	1.125	.688	10.00	1.125	.688	10.00	1.125
16X10X .688/1.125T	42.72	67.4	149.6	806.0	5.9	12.0	5.2 23.38	17.13	.688	11.00	1.125	.688	11.00	1.125	.688	11.00	1.125	.688	11.00	1.125	.688	11.00	1.125
16X11X .688/1.125T	44.89	68.2	160.8	830.9	5.8	12.2	6.2 26.00	19.25	.750	10.00	1.250	.750	10.00	1.250	.750	10.00	1.250	.750	10.00	1.250	.750	10.00	1.250
18X 9X .750/1.125T	45.37	84.7	162.9	1078.2	6.6	12.7	6.6 23.63	19.13	.750	9.00	1.125	.750	9.00	1.125	.750	9.00	1.125	.750	9.00	1.125	.750	9.00	1.125
18X11X .750/1.000T	47.04	85.3	174.6	1101.0	6.6	12.9	6.3 24.50	19.00	.750	11.00	1.000	.750	11.00	1.000	.750	11.00	1.000	.750	11.00	1.000	.750	11.00	1.000
18X 9X .750/1.250T	47.52	86.5	174.8	1126.2	6.6	13.0	6.4 24.75	19.25	.750	9.00	1.250	.750	9.00	1.250	.750	9.00	1.250	.750	9.00	1.250	.750	9.00	1.250
18X11X .750/1.125T	49.69	87.2	188.6	1153.8	6.5	13.2	6.1 25.88	19.13	.750	11.00	1.125	.750	11.00	1.125	.750	11.00	1.125	.750	11.00	1.125	.750	11.00	1.125
18X10X .750/1.250T	49.92	87.8	188.9	1156.8	6.6	13.3	6.2 26.00	19.25	.750	10.00	1.250	.750	10.00	1.250	.750	10.00	1.250	.750	10.00	1.250	.750	10.00	1.250
18X12X .750/1.125T	51.84	88.2	201.4	1187.3	6.5	13.5	5.9 27.00	19.13	.750	12.00	1.125	.750	12.00	1.125	.750	12.00	1.125	.750	12.00	1.125	.750	12.00	1.125
18X11X .750/1.250T	52.32	88.9	202.9	1203.9	6.5	13.5	5.9 27.25	19.25	.750	11.00	1.250	.750	11.00	1.250	.750	11.00	1.250	.750	11.00	1.250	.750	11.00	1.250
21X 9X .875/1.125T	54.72	120.5	206.2	1699.3	7.6	14.1	8.2 28.50	22.13	.875	9.00	1.125	.875	9.00	1.125	.875	9.00	1.125	.875	9.00	1.125	.875	9.00	1.125
18X 9X .875/1.500T	56.16	99.5	202.6	1315.3	6.6	14.2	6.5 29.25	19.50	.875	9.00	1.500	.875	9.00	1.500	.875	9.00	1.500	.875	9.00	1.500	.875	9.00	1.500
21X10X .875/1.125T	56.89	122.5	221.5	1763.2	7.6	14.4	8.0 29.63	22.13	.875	10.00	1.125	.875	10.00	1.125	.875	10.00	1.125	.875	10.00	1.125	.875	10.00	1.125
21X 9X .875/1.375T	59.04	125.6	233.5	1845.5	7.6	14.7	7.9 30.75	22.38	.875	9.00	1.375	.875	9.00	1.375	.875	9.00	1.375	.875	9.00	1.375	.875	9.00	1.375
21X11X .875/1.125T	59.04	124.4	236.7	1822.7	7.6	14.6	7.7 30.75	22.13	.875	11.00	1.125	.875	11.00	1.125	.875	11.00	1.125	.875	11.00	1.125	.875	11.00	1.125
21X12X .875/1.125T	61.21	126.1	252.1	1878.2	7.5	14.9	7.5 31.88	22.13	.875	12.00	1.125	.875	12.00	1.125	.875	12.00	1.125	.875	12.00	1.125	.875	12.00	1.125
21X 9X .875/1.500T	61.21	127.9	246.9	1914.2	7.6	15.0	7.8 31.88	22.50	.875	9.00	1.500	.875	9.00	1.500	.875	9.00	1.500	.875	9.00	1.500	.875	9.00	1.500
21X10X .875/1.375T	61.69	127.6	251.9	1914.3	7.6	15.0	7.6 32.13	22.38	.875	10.00	1.375	.875	10.00	1.375	.875	10.00	1.375	.875	10.00	1.375	.875	10.00	1.375
21X10X .875/1.500T	64.09	129.9	266.8	1985.0	7.6	15.3	7.4 33.38	22.50	.875	10.00	1.500	.875	10.00	1.500	.875	10.00	1.500	.875	10.00	1.500	.875	10.00	1.500
21X11X .875/1.375T	64.32	129.5	269.8	1977.4	7.6	15.3	7.3 33.50	22.38	.875	11.00	1.375	.875	11.00	1.375	.875	11.00	1.375	.875	11.00	1.375	.875	11.00	1.375
21X11X .875/1.500T	66.97	131.8	286.0	2059.6	7.5	15.6	7.2 34.88	22.50	.875	11.00	1.500	.875	11.00	1.500	.875	11.00	1.500	.875	11.00	1.500	.875	11.00	1.500
24X10X1.000/1.125T	67.68	167.7	274.7	2639.4	8.5	15.7	9.6 35.25	25.13	1.000	10.00	1.125	1.000	10.00	1.125	1.000	10.00	1.125	1.000	10.00	1.125	1.000	10.00	1.125
21X13X .875/1.375T	69.60	132.6	305.0	2030.1	7.5	15.8	6.8 36.25	22.38	.875	13.00	1.375	.875	13.00	1.375	.875	13.00	1.375	.875	13.00	1.375	.875	13.00	1.375
24X11X1.000/1.125T	69.85	170.5	292.1	2728.6	8.5	16.0	9.3 36.38	25.13	1.000	11.00	1.125	1.000	11.00	1.125	1.000	11.00	1.125	1.000	11.00	1.125	1.000	11.00	1.125
21X12X .875/1.500T	69.85	133.4	305.5	2109.3	7.5	15.8	6.9 36.38	22.50	.875	12.00	1.500	.875	12.00	1.500	.875	12.00	1.500	.875	12.00	1.500	.875	12.00	1.500
24X12X1.000/1.125T	72.00	172.9	309.6	2812.8	8.5	16.3	9.1 37.50	25.13	1.000	12.00	1.125	1.000	12.00	1.125	1.000	12.00	1.125	1.000	12.00	1.125	1.000	12.00	1.125
21X14X .875/1.375T	72.25	134.0	323.1	2180.3	7.4	16.0	6.6 37.63	22.38	.875	14.00	1.375	.875	14.00	1.375	.875	14.00	1.375	.875	14.00	1.375	.875	14.00	1.375
24X10X1.000/1.375T	72.48	174.8	309.8	2860.7	8.6	16.4	9.2 37.75	25.38	1.000	10.00	1.375	1.000	10.00	1.375	1.000	10.00	1.375	1.000	10.00	1.375	1.000	10.00	1.375
21X13X .875/1.500T	72.73	134.9	324.3	2164.1	7.5	16.0	6.7 37.88	22.50	.875	13.00	1.500	.875	13.00	1.500	.875	13.00	1.500	.875	13.00	1.500	.875	13.00	1.500
24X10X1.000/1.500T	74.98	178.1	327.0	2965.2	8.6	16.7	9.1 39.00	25.50	1.000	10.00	1.500	1.000	10.00	1.500	1.000	10.00	1.500	1.000	10.00	1.500	1.000	10.00	1.500
24X11X1.000/1.375T	75.13	177.6	330.6	2957.8	8.6	16.7	8.9 39.13	25.38	1.000	11.00	1.375	1.000	11.00	1.375	1.000	11.00	1.375	1.000	11.00	1.375	1.000	11.00	1.375
21X14X .875/1.500T	75.61	136.2	343.3	2215.0	7.4	16.3	6.5 39.38	22.50	.875	14.00	1.500	.875	14.00	1.500	.875	14.00	1.500	.875	14.00	1.500	.875	14.00	1.500
24X11X1.000/1.500T	77.76	180.8	349.6	3065.4	8.6	17.0	8.8 40.50	22.50	1.000	11.00	1.500	1.000	11.00	1.500	1.000	11.00	1.500	1.000	11.00	1.500	1.000	11.00	1.500
21X15X .875/1.500T	78.49	137.4	361.9	2262.2	7.3	16.5	6.3 40.88	22.50	.875	15.00	1.500	.875	15.00	1.500	.875	15.00	1.500	.875	15.00	1.500	.875	15.00	1.500
24X10X1.000/1.750T	79.68	184.0	360.6	3164.1	8.6	17.2	8.8 41.50	25.75	1.000	10.00	1.750	1.000	10.00	1.750	1.000	10.00	1.750	1.000	10.00	1.750	1.000	10.00	1.750

0.2188 - 7/32 in.

•219 IN. PLATE (AREA= 1.10 SQ.IN.)

***** BEAM DIMENSIONS *****															SHEAR AREA	
SECTION MODULUS															FLANGE	
NOMINAL SIZE		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK			
24X13X1.000/1.375T	80.41	182.3	372.6	372.6	3133.6	9.5	17.2	8.4	41.88	25.38	1.000	13.00	1.375	25.60	25.60	
24X12X1.000/1.500T	80.64	183.3	372.1	372.1	3158.6	8.6	17.2	8.5	42.00	25.50	1.000	12.00	1.500	25.72	25.72	
21X16X.875/1.500T	81.37	138.4	380.6	380.6	2306.3	7.3	16.7	6.1	42.38	22.50	.875	16.00	1.500	19.88	19.88	
24X11X1.000/1.750T	83.04	186.8	396.3	396.3	3269.3	8.6	17.5	8.5	43.25	25.75	1.000	11.00	1.750	25.97	25.97	
24X14X1.000/1.375T	83.04	184.4	393.3	393.3	3213.3	8.5	17.4	8.2	43.25	25.38	1.000	14.00	1.375	25.60	25.60	
24X13X1.000/1.500T	83.52	185.5	394.9	394.9	3246.0	8.5	17.5	8.2	43.50	25.50	1.000	13.00	1.500	25.72	25.72	
24X15X1.000/1.375T	85.69	186.3	413.4	413.4	3287.8	8.5	17.6	8.0	44.63	25.38	1.000	15.00	1.375	25.60	25.60	
24X12X1.000/1.750T	86.40	189.2	411.9	411.9	3366.8	8.5	17.8	8.2	45.00	25.75	1.000	12.00	1.750	25.97	25.97	
24X14X1.000/1.500T	86.40	187.6	416.9	416.9	3327.1	8.5	17.7	8.0	45.00	25.50	1.000	14.00	1.500	25.72	25.72	
24X15X1.000/1.500T	89.28	189.4	439.0	439.0	3403.4	8.5	18.0	7.8	46.50	25.50	1.000	15.00	1.500	25.72	25.72	
24X13X1.000/1.750T	89.76	191.4	437.5	437.5	3457.2	8.5	18.1	7.9	46.75	25.75	1.000	13.00	1.750	25.97	25.97	
27X12X1.125/1.375T	90.01	239.2	423.8	423.8	4372.2	9.5	18.3	10.3	46.88	28.38	1.125	12.00	1.375	32.17	32.17	
27X13X1.125/1.500T	92.64	242.3	447.8	447.8	4496.4	9.5	18.6	10.0	48.25	28.38	1.125	13.00	1.375	32.17	32.17	
27X12X1.125/1.500T	92.89	243.5	447.5	447.5	4528.7	9.6	18.6	10.1	48.38	28.50	1.125	12.00	1.500	32.31	32.31	
24X14X1.000/1.750T	93.12	193.4	462.1	462.1	3540.8	8.4	18.3	7.7	48.50	25.75	1.000	14.00	1.750	25.97	25.97	
27X14X1.125/1.375T	95.29	245.3	471.0	471.0	4613.4	9.5	18.8	9.8	49.63	28.38	1.125	14.00	1.375	32.17	32.17	
27X13X1.125/1.500T	95.77	246.7	473.0	473.0	4656.8	9.6	18.9	9.8	49.88	28.50	1.125	13.00	1.500	32.31	32.31	
24X15X1.000/1.750T	96.48	195.2	487.5	487.5	3619.4	8.4	18.5	7.4	50.25	25.75	1.000	15.00	1.750	25.97	25.97	
27X12X1.125/1.750T	98.65	251.5	493.5	493.5	4825.8	9.6	19.2	9.8	51.38	28.75	1.125	12.00	1.750	32.59	32.59	
27X15X1.125/1.500T	101.53	252.4	523.6	523.6	4891.5	9.5	19.4	9.3	52.88	28.50	1.125	15.00	1.500	32.31	32.31	
27X13X1.125/1.750T	102.01	254.7	522.6	522.6	4960.6	9.6	19.5	9.5	53.13	28.75	1.125	13.00	1.750	32.59	32.59	
27X12X1.125/2.000T	104.41	258.8	537.4	537.4	5104.2	9.6	19.7	9.5	54.38	29.00	1.125	12.00	2.000	32.87	32.87	
27X14X1.125/1.750T	105.37	257.6	551.5	551.5	5086.9	9.5	19.7	9.2	54.88	28.75	1.125	14.00	1.750	32.59	32.59	
27X13X1.125/2.000T	108.25	262.0	570.1	570.1	5244.3	9.6	20.0	9.2	56.38	29.00	1.125	13.00	2.000	32.87	32.87	
30X15X1.250/1.500T	115.20	326.9	618.4	618.4	6782.8	10.5	20.8	11.0	60.00	31.50	1.250	15.00	1.500	39.65	39.65	
30X16X1.250/1.500T	118.08	330.4	646.8	646.8	6936.1	10.5	21.0	10.7	61.50	31.50	1.250	16.00	1.500	39.65	39.65	
30X14X1.250/1.750T	119.04	333.8	649.4	649.4	7047.8	10.6	21.1	10.9	62.00	31.75	1.250	14.00	1.750	39.96	39.96	
30X17X1.250/1.750T	129.12	344.2	746.7	746.7	7531.3	10.5	21.9	10.1	67.25	31.75	1.250	17.00	1.750	39.96	39.96	
30X15X1.250/2.000T	129.60	347.0	744.1	744.1	7624.1	10.5	22.0	10.2	67.50	32.00	1.250	15.00	2.000	40.27	40.27	
30X16X1.250/2.000T	133.44	350.3	780.6	780.6	7791.0	10.5	22.2	10.0	69.50	32.00	1.250	16.00	2.000	40.27	40.27	
33X17X1.375/1.750T	144.25	436.3	866.7	866.7	10148.8	11.5	23.3	11.7	75.13	34.75	1.375	17.00	1.750	48.08	48.08	
33X15X1.375/2.000T	144.73	439.5	864.6	864.6	10262.0	11.6	23.3	11.9	75.38	35.00	1.375	15.00	2.000	48.43	48.43	
33X16X1.375/2.000T	148.57	444.2	905.0	905.0	10493.0	11.6	23.6	11.6	77.38	35.00	1.375	16.00	2.000	48.43	48.43	
33X17X1.375/2.000T	152.41	448.4	945.5	945.5	10712.8	11.5	23.9	11.3	79.38	35.00	1.375	17.00	2.000	48.43	48.43	
36X16X1.500/1.750T	157.44	536.6	958.8	958.8	13063.6	12.5	24.3	13.6	82.00	37.75	1.500	16.00	1.750	56.95	56.95	
36X17X1.500/1.750T	160.80	542.4	937.8	937.8	13342.4	12.5	24.6	13.4	83.75	37.75	1.500	17.00	1.750	56.95	56.95	
36X15X1.500/2.000T	161.28	546.0	996.0	996.0	13477.9	12.6	24.7	13.5	84.00	38.00	1.500	15.00	2.000	57.33	57.33	
36X16X1.500/2.000T	165.12	552.1	1040.5	1040.5	13785.5	12.6	25.0	13.2	86.00	38.00	1.500	16.00	2.000	57.33	57.33	

0.2188 - 7/32 in.



250 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	WEB THICK	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA							FLANGE WIDTH	THICK	
3X 2X .125/ .188T	1.44	3.9	1.5	3.7	1.3	1.0	2.5	.75	3.19	.125	2.00	.188	.43
3X 2X .188/ .250T	2.04	4.0	1.9	4.6	1.4	1.1	2.4	1.06	3.25	.188	2.00	.250	.66
3X 2X .188/ .313T	2.28	4.2	2.3	5.3	1.4	1.3	2.3	1.19	3.31	.188	2.00	.313	.67
4X 2X .188/ .250T	2.40	5.5	2.8	8.3	1.8	1.5	3.0	1.25	4.25	.188	2.00	.250	.85
4X 2X .188/ .313T	2.65	5.7	3.2	9.4	1.8	1.6	2.9	1.38	4.31	.188	2.00	.313	.86
3X 3X .188/ .313T	2.88	4.5	3.2	6.6	1.5	1.5	2.1	1.50	3.31	.188	3.00	.313	.67
4X 3X .188/ .313T	3.24	6.0	4.4	11.5	1.9	1.9	2.6	1.69	4.31	.188	3.00	.313	.86
3X 3X .250/ .375T	3.61	4.7	3.8	7.6	1.5	1.6	2.0	1.88	3.38	.250	3.00	.375	.91
3X 3X .250/ .438T	3.96	4.8	4.2	8.2	1.5	1.7	2.0	2.06	3.44	.250	3.00	.438	.92
4X 3X .250/ .375T	4.09	6.3	5.2	13.2	1.9	2.1	2.5	2.13	4.38	.250	3.00	.375	1.16
5X 3X .250/ .313T	4.20	7.8	5.9	18.7	2.3	2.4	3.2	2.19	5.31	.250	3.00	.313	1.39
4X 3X .250/ .438T	4.44	6.4	5.8	14.3	2.0	2.2	2.5	2.31	4.44	.250	3.00	.438	1.17
5X 3X .250/ .375T	4.57	8.0	6.7	20.5	2.3	2.6	3.1	2.38	5.38	.250	3.00	.375	1.41
6X 3X .250/ .313T	4.68	9.5	7.4	27.3	2.7	2.9	3.7	2.44	6.31	.250	3.00	.313	1.64
5X 3X .250/ .438T	4.92	8.3	7.4	22.2	2.4	2.7	3.0	2.56	6.38	.250	3.00	.438	1.42
6X 3X .250/ .375T	5.05	9.8	8.3	29.8	2.7	3.0	3.6	2.63	6.38	.250	3.00	.375	1.66
6X 3X .250/ .438T	5.40	10.1	9.2	32.1	2.8	3.2	3.5	2.81	6.44	.250	3.00	.438	1.67
6X 4X .250/ .375T	5.76	10.2	10.2	33.7	2.8	3.3	3.3	3.00	6.38	.250	4.00	.375	1.66
6X 4X .250/ .438T	6.24	10.4	11.4	36.4	2.8	3.5	3.2	3.25	6.44	.250	4.00	.438	1.67
5X 4X .313/ .500T	6.84	8.9	10.4	27.7	2.4	3.1	2.7	3.56	5.50	.313	4.00	.500	1.80
7X 4X .313/ .375T	7.08	12.6	12.6	48.2	3.1	3.8	3.9	3.69	7.38	.313	4.00	.375	2.39
6X 4X .313/ .500T	7.45	11.1	12.9	40.1	2.7	3.6	3.1	3.88	6.50	.313	4.00	.500	2.11
7X 4X .313/ .438T	7.56	13.0	14.0	51.7	3.1	4.0	3.7	3.94	7.44	.313	4.00	.438	2.41
6X 4X .313/ .563T	7.93	11.3	14.0	42.5	2.8	3.8	3.0	4.13	6.56	.313	4.00	.563	2.13
7X 4X .313/ .500T	8.04	13.3	15.3	55.1	3.1	4.2	3.6	4.19	7.50	.313	4.00	.500	2.43
6X 5X .313/ .500T	8.41	11.3	15.3	43.9	2.7	3.9	2.9	4.38	6.50	.313	5.00	.500	2.11
7X 4X .313/ .563T	8.52	13.5	16.7	58.3	3.1	4.3	3.5	4.44	7.56	.313	4.00	.563	2.44
7X 5X .313/ .500T	9.00	13.6	18.1	60.2	3.1	4.4	3.3	4.63	7.50	.313	5.00	.500	2.43
8X 4X .375/ .438T	9.12	15.9	16.9	71.2	3.4	4.5	4.2	4.75	8.44	.375	4.00	.438	3.26
7X 5X .313/ .563T	9.60	13.8	19.8	63.6	3.1	4.6	3.2	5.00	7.56	.313	5.00	.563	2.44
8X 4X .375/ .500T	9.60	16.3	18.4	75.6	3.4	4.6	4.1	5.00	8.50	.375	4.00	.500	3.28
9X 4X .375/ .438T	9.85	18.4	19.6	92.2	3.7	5.0	4.7	5.13	9.44	.375	4.00	.438	3.63
8X 4X .375/ .563T	10.08	16.6	19.9	79.6	3.5	4.8	4.0	5.25	8.56	.375	4.00	.563	3.30
9X 4X .375/ .500T	10.33	18.9	21.3	97.6	3.8	5.2	4.6	5.38	9.50	.375	4.00	.500	3.66
8X 4X .375/ .625T	10.56	16.9	21.3	83.6	3.5	4.9	3.9	5.50	8.63	.375	4.00	.625	3.33
7X 6X .313/ .563T	10.68	14.1	22.8	68.0	3.1	4.8	3.0	5.56	7.56	.313	6.00	.563	2.44
9X 4X .375/ .563T	10.81	19.2	22.9	102.6	3.8	5.3	4.5	5.63	9.56	.375	4.00	.563	3.68
8X 5X .375/ .563T	11.16	17.1	23.4	86.9	3.5	5.1	3.7	5.81	8.56	.375	5.00	.563	3.30
9X 5X .375/ .500T	11.23	19.4	24.8	106.2	3.8	5.5	4.3	5.88	9.50	.375	5.00	.500	3.66
8X 5X .375/ .625T	11.77	17.4	25.1	91.2	3.5	5.2	3.6	6.13	8.63	.375	5.00	.625	3.33
9X 5X .375/ .563T	11.88	19.8	26.8	111.8	3.8	5.6	4.2	6.19	9.56	.375	5.00	.563	3.68
8X 6X .375/ .563T	12.25	17.4	26.9	93.2	3.5	5.3	3.5	6.38	8.56	.375	6.00	.563	3.30
9X 5X .375/ .625T	12.43	20.2	28.7	117.1	3.8	5.8	4.1	6.50	9.63	.375	5.00	.625	3.71
9X 6X .375/ .563T	12.96	20.3	30.7	119.7	3.8	5.9	3.9	6.75	9.56	.375	6.00	.563	3.68
10X 5X .438/ .500T	13.21	23.4	29.0	139.3	4.1	5.9	4.8	6.88	10.50	.438	5.00	.500	4.71

0.2500 - 1/4 in.

•250 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		INERTIA		R	YP	YF	***** 9EAM DIMENSIONS *****				SHEAR AREA
WT/FT	ZPL	ZFL	WT/FT	ZPL	ZFL				DEPTH	THICK	WEB THICK	FLANGE THICK	
9X 6X .375/.625T	13.63	20.6	33.0	125.3	3.0	6.1	3.8	7.13	9.63	.375	6.00	.625	3.71
10X 5X .438/.563T	13.90	23.9	31.2	146.3	4.1	6.1	4.7	7.19	10.56	.438	5.00	.563	4.73
10X 5X .438/.625T	14.40	24.3	33.2	152.9	4.1	6.3	4.6	7.50	10.63	.438	5.00	.625	4.77
8X 6X .438/.688T	14.65	18.9	31.3	105.3	3.4	5.6	3.4	7.63	8.69	.438	6.00	.688	3.92
9X 5X .438/.750T	14.76	21.9	33.2	131.8	3.0	6.0	4.0	7.69	9.75	.438	5.00	.750	4.38
10X 6X .438/.563T	14.88	24.5	35.4	156.6	4.1	6.4	4.4	7.75	10.56	.438	6.00	.563	4.73
10X 5X .438/.688T	15.00	24.8	35.4	159.4	4.2	6.4	4.5	7.81	10.69	.438	5.00	.688	4.79
10X 6X .438/.625T	15.61	24.9	37.9	163.7	4.1	6.6	4.3	8.13	10.63	.438	6.00	.625	4.77
9X 6X .438/.750T	16.20	22.4	38.0	140.8	3.8	6.3	3.7	8.44	9.75	.438	6.00	.750	4.38
10X 6X .438/.688T	16.32	25.3	40.4	170.4	4.1	6.7	4.2	8.50	10.69	.438	6.00	.688	4.79
9X 7X .438/.688T	16.80	22.4	40.2	143.1	3.7	6.4	3.6	8.75	9.69	.438	7.00	.688	4.35
12X 5X .500/.563T	16.92	32.2	40.2	229.2	4.7	7.1	5.7	8.81	12.56	.500	5.00	.563	6.41
10X 6X .438/.750T	17.05	25.7	43.1	177.1	4.1	6.9	4.1	8.88	10.75	.438	6.00	.750	4.82
12X 5X .500/.625T	17.53	32.9	42.7	239.3	4.8	7.3	5.6	9.13	12.63	.500	5.00	.625	6.44
10X 7X .438/.688T	17.64	25.8	45.5	180.2	4.1	7.0	4.0	9.19	10.69	.438	7.00	.688	4.79
12X 6X .500/.563T	18.01	33.1	45.2	244.9	4.8	7.4	5.4	9.38	12.56	.500	6.00	.563	6.41
12X 5X .500/.688T	18.12	33.4	45.3	248.9	4.8	7.4	5.5	9.44	12.69	.500	5.00	.688	6.47
10X 7X .438/.750T	18.49	26.2	48.3	186.8	4.1	7.1	3.9	9.63	10.75	.438	7.00	.750	4.82
12X 6X .500/.625T	18.72	33.7	48.3	255.8	4.8	7.6	5.3	9.75	12.63	.500	6.00	.625	6.44
9X 8X .438/.750T	19.08	23.1	47.5	155.3	3.7	6.7	3.3	9.94	9.75	.438	8.00	.750	4.38
12X 6X .500/.688T	19.45	34.3	51.2	265.9	4.8	7.7	5.2	10.13	12.69	.500	6.00	.688	6.47
12X 5X .500/.875T	19.93	35.0	52.6	275.9	4.8	7.9	5.2	10.38	12.88	.500	5.00	.875	6.57
12X 6X .500/.750T	20.16	34.9	54.2	275.9	4.8	7.9	5.1	10.50	12.75	.500	6.00	.750	6.50
12X 7X .500/.688T	20.76	35.1	57.2	281.2	4.8	8.0	4.9	10.81	12.69	.500	7.00	.688	6.47
12X 7X .500/.750T	21.60	35.6	60.7	291.7	4.8	8.2	4.8	11.25	12.75	.500	7.00	.750	6.50
14X 6X .563/.625T	22.33	44.3	60.1	379.7	5.4	8.6	6.3	11.63	14.63	.563	6.00	.625	8.38
12X 8X .500/.750T	23.04	36.2	67.1	305.6	4.8	8.4	4.6	12.00	12.75	.500	8.00	.750	6.50
14X 6X .563/.688T	23.04	45.1	63.6	394.2	5.4	8.7	6.2	12.00	14.69	.563	6.00	.688	8.41
12X 7X .500/.875T	23.29	36.6	67.3	311.0	4.8	8.5	4.6	12.13	12.88	.500	7.00	.875	6.57
14X 6X .563/.750T	23.77	45.8	67.1	408.4	5.4	8.9	6.1	12.38	14.75	.563	6.00	.750	8.45
14X 7X .563/.688T	24.36	46.2	70.5	416.8	5.4	9.0	5.9	12.69	14.69	.563	7.00	.688	8.41
12X 8X .500/.875T	24.96	37.1	74.6	325.5	4.7	8.8	4.4	13.00	12.88	.500	8.00	.875	6.57
14X 7X .563/.750T	25.21	46.9	74.5	431.7	5.4	9.2	5.8	13.13	14.75	.563	7.00	.750	8.45
12X 7X .563/1.000T	26.40	39.5	74.8	452.7	4.7	8.7	4.6	13.75	13.00	.563	7.00	1.000	7.46
14X 8X .563/.750T	26.65	47.8	81.9	452.7	5.4	9.5	5.5	13.88	14.75	.563	8.00	.750	8.45
14X 7X .563/.875T	26.88	48.2	82.2	459.9	5.5	9.5	5.6	14.00	14.88	.563	7.00	.875	8.52
12X 8X .563/1.000T	28.32	40.2	82.8	358.4	4.7	8.9	4.3	14.75	13.00	.563	8.00	1.000	7.46
14X 8X .563/.875T	28.57	49.1	90.7	482.1	5.4	9.8	5.3	14.88	14.88	.563	8.00	.875	8.52
14X 9X .563/.875T	30.24	49.9	99.0	501.8	5.4	10.1	5.1	15.75	14.88	.563	9.00	.875	8.52
14X 8X .563/1.000T	30.49	50.3	99.4	509.3	5.4	10.1	5.1	15.88	15.00	.563	8.00	1.000	8.59
14X 7X .625/1.125T	31.93	53.4	98.6	532.4	5.4	10.0	5.4	16.63	15.13	.625	7.00	1.125	9.61
12X 10X .563/1.000T	32.16	41.2	98.4	384.6	4.6	9.3	3.9	16.75	13.00	.563	10.00	1.000	7.46
14X 9X .563/1.000T	32.41	51.0	100.7	529.6	5.4	10.4	4.9	16.88	15.00	.563	9.00	1.000	8.59
12X 9X .625/1.125T	33.95	43.9	99.1	406.7	4.6	9.3	4.1	17.63	13.13	.625	9.00	1.125	8.36
14X 8X .625/1.125T	34.08	54.3	108.8	557.2	5.4	10.3	5.1	17.75	15.13	.625	8.00	1.125	9.61

0.2500 - 1/4 in.



.250 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	VP	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X 7X .688/1.000T	34.56	67.0	109.9	718.4	6.1	10.7	6.5	18.00	17.00	.688	7.00	1.000	11.87
12X10X .625/1.125T	36.00	44.4	107.6	420.3	4.6	9.5	3.9	16.75	13.13	.625	10.00	1.125	8.36
16X 8X .688/1.000T	36.48	68.4	120.6	753.1	6.1	11.0	6.2	19.00	17.00	.688	8.00	1.000	11.87
16X 7X .688/1.250T	37.92	70.1	126.5	783.5	6.1	11.3	6.2	19.75	17.25	.688	7.00	1.250	12.04
16X 9X .688/1.000T	38.40	69.6	131.4	784.8	6.1	11.3	6.0	20.00	17.00	.688	9.00	1.000	11.87
18X 8X .750/.875T	39.36	84.1	131.2	980.2	6.7	11.7	7.5	20.50	18.88	.750	8.00	.875	14.35
14X 9X .688/1.250T	40.09	59.2	129.5	630.1	5.3	10.6	4.9	20.88	15.25	.688	9.00	1.250	10.66
16X10X .688/1.000T	40.32	70.6	142.0	813.4	6.0	11.5	5.7	21.00	17.00	.688	10.00	1.000	11.87
16X 9X .688/1.125T	40.57	71.2	141.8	823.5	6.0	11.6	5.8	21.13	17.13	.688	9.00	1.125	11.96
18X 9X .750/.875T	41.05	85.6	142.1	1022.0	6.7	11.9	7.2	21.38	18.88	.750	9.00	.875	14.35
18X 8X .750/1.000T	41.28	86.3	142.4	1034.3	6.7	12.0	7.3	21.50	19.00	.750	8.00	1.000	14.44
16X10X .688/1.125T	41.89	73.0	165.0	879.8	6.0	12.0	5.3	23.38	17.13	.688	11.00	1.125	11.96
18X 9X .688/1.125T	45.37	89.9	166.7	1131.6	6.7	12.6	6.8	23.63	19.13	.750	9.00	1.125	14.54
18X11X .750/1.000T	47.04	90.5	178.6	1156.0	6.7	12.8	6.5	24.50	19.00	.750	11.00	1.000	14.44
18X 9X .750/1.250T	47.52	91.7	178.8	1182.2	6.7	12.9	6.6	24.75	19.25	.750	9.00	1.250	14.63
18X11X .750/1.125T	49.69	92.5	192.9	1211.6	6.7	13.1	6.3	25.88	19.13	.750	11.00	1.125	14.54
18X10X .750/1.250T	49.92	93.1	193.2	1225.1	6.7	13.2	6.3	26.00	19.25	.750	10.00	1.250	14.63
18X12X .750/1.125T	51.84	93.6	206.0	1247.1	6.6	13.3	6.1	27.00	19.13	.750	12.00	1.125	14.54
18X11X .750/1.250T	52.32	94.3	207.6	1264.5	6.6	13.4	6.1	27.25	19.25	.750	11.00	1.250	14.63
21X 9X .875/1.125T	54.72	126.3	210.2	1765.1	7.7	14.0	8.4	28.50	22.13	.875	9.00	1.125	19.58
18X 9X .875/1.500T	56.16	104.7	206.9	1373.2	6.7	13.1	6.6	29.25	19.50	.875	9.00	1.500	17.28
21X10X .875/1.125T	56.89	128.4	225.7	1831.7	7.7	14.3	8.1	29.63	22.13	.875	10.00	1.125	19.58
21X 9X .875/1.375T	59.04	131.5	238.0	1917.0	7.7	14.6	8.1	30.75	22.38	.875	9.00	1.375	19.80
21X11X .875/1.125T	59.04	130.4	241.1	1893.7	7.7	14.5	7.9	30.75	22.13	.875	11.00	1.125	19.58
21X12X .875/1.125T	61.21	132.1	256.8	1951.7	7.7	14.8	7.6	31.88	22.13	.875	12.00	1.125	19.58
21X 9X .875/1.500T	61.21	133.9	251.6	1988.4	7.7	14.9	7.8	32.13	22.38	.875	9.00	1.500	19.91
21X10X .875/1.375T	61.69	133.7	256.6	1988.8	7.7	14.9	7.6	32.13	22.38	.875	10.00	1.375	19.80
21X10X .875/1.500T	64.09	136.0	271.8	2062.4	7.7	15.2	7.6	33.38	22.50	.875	10.00	1.500	19.91
21X11X .875/1.375T	64.32	135.6	274.9	2054.7	7.7	15.2	7.5	33.50	22.38	.875	11.00	1.375	19.80
21X11X .875/1.500T	66.97	137.9	291.3	2129.7	7.7	15.4	7.3	34.88	22.50	.875	11.00	1.500	19.91
24X10X1.000/1.125T	67.68	174.1	279.1	2721.6	8.6	15.6	9.8	35.25	22.38	1.000	10.00	1.125	25.38
21X13X .875/1.375T	69.60	138.8	311.4	2172.5	7.6	15.7	7.0	36.25	22.38	.875	13.00	1.375	19.80
24X11X1.000/1.125T	69.85	177.0	296.7	2813.6	8.6	15.9	9.5	36.38	25.13	1.000	11.00	1.125	25.38
21X12X .875/1.500T	69.85	139.6	311.1	2192.2	7.6	15.7	7.0	36.38	22.50	.875	12.00	1.500	19.91
24X12X1.000/1.125T	72.00	179.5	314.4	2900.6	8.6	16.2	9.2	37.50	25.13	1.000	12.00	1.125	25.38
21X18X .875/1.375T	72.25	140.2	323.1	2224.9	7.5	15.9	6.8	37.63	22.38	.875	14.00	1.375	19.80
24X10X1.000/1.375T	72.48	181.4	314.6	2943.6	8.7	16.3	9.4	37.75	25.38	1.000	10.00	1.375	25.63
21X13X .875/1.500T	72.73	141.1	330.3	2249.5	7.6	15.9	6.8	37.88	22.50	.875	13.00	1.500	19.91
24X10X1.000/1.500T	74.88	184.8	332.1	3057.3	8.7	16.5	9.2	39.00	25.50	1.000	10.00	1.500	25.75
24X11X1.000/1.375T	75.13	184.3	335.8	3049.8	8.7	16.5	9.1	39.13	25.38	1.000	11.00	1.375	25.63
21X18X .875/1.500T	75.61	142.5	349.7	2302.8	7.5	16.2	6.6	39.38	22.50	.875	14.00	1.500	19.91
24X11X1.000/1.500T	77.76	187.6	355.0	3160.8	8.7	16.8	8.9	40.50	22.50	1.000	11.00	1.500	25.75
21X15X .875/1.500T	78.49	143.7	368.6	2352.2	7.5	16.4	6.4	40.88	22.50	.875	15.00	1.500	19.91
24X10X1.000/1.750T	79.68	190.9	366.2	3262.3	8.7	17.1	8.9	41.50	25.75	1.000	10.00	1.750	26.00

0.2500 - 1/4 in.

250 IN. PLATE (AREA= 1.44 SQ.IN.)

NOMINAL SIZE	WT./FT	SECTION MODULUS		R	YF	AREA	DEPTH	BEAM DIMENSIONS		SHEAR AREA
		ZPL	ZFL					WEB THICK	FLANGE WIDTH	
24X13X1.000/1.375T	80.41	189.1	378.3	8.6	17.1	8.5	41.88	1.000	13.00	1.375
24X12X1.000/1.500T	80.64	190.2	377.8	8.7	17.1	8.6	42.00	1.000	12.00	1.500
21X16X.875/1.500T	81.37	144.8	387.6	7.4	16.6	6.2	42.38	.875	16.00	1.500
24X11X1.000/1.750T	83.04	193.7	392.3	9.7	17.4	8.6	43.25	1.000	11.00	1.750
24X14X1.000/1.375T	83.04	191.3	399.2	8.6	17.3	8.3	43.25	1.000	14.00	1.375
24X13X1.000/1.500T	83.52	192.4	400.9	8.6	17.4	8.4	43.50	1.000	13.00	1.500
24X15X1.000/1.375T	85.69	193.2	419.6	8.6	17.5	8.1	44.63	1.000	15.00	1.375
24X12X1.000/1.750T	86.40	198.2	418.2	8.6	17.7	8.3	45.00	1.000	12.00	1.750
24X14X1.000/1.500T	86.40	194.5	423.2	8.6	17.6	8.1	45.00	1.000	14.00	1.500
24X15X1.000/1.500T	89.28	196.4	445.6	8.6	17.9	7.9	46.50	1.000	15.00	1.500
24X13X1.000/1.750T	89.76	198.4	444.1	8.6	18.0	8.0	46.75	1.000	13.00	1.750
27X13X1.125/1.375T	90.01	246.5	429.3	9.6	18.2	10.4	46.00	1.125	12.00	1.375
27X12X1.125/1.375T	92.64	249.7	453.5	9.6	18.5	10.2	48.25	1.125	13.00	1.375
27X12X1.125/1.500T	92.89	251.0	453.2	9.7	18.5	10.2	48.38	1.125	12.00	1.500
24X14X1.000/1.750T	93.12	200.5	469.1	8.6	18.2	7.8	48.50	1.000	14.00	1.750
27X14X1.125/1.375T	95.29	252.8	477.0	9.6	18.7	9.9	49.63	1.125	14.00	1.375
27X13X1.125/1.500T	95.77	254.2	479.1	9.6	18.8	10.0	49.00	1.125	13.00	1.500
24X15X1.000/1.750T	96.48	202.3	494.9	8.5	18.5	7.5	50.25	1.000	15.00	1.750
27X12X1.125/1.750T	98.65	259.1	499.8	9.7	19.1	9.9	51.38	1.125	12.00	1.750
27X15X1.125/1.500T	101.53	260.1	530.2	9.6	19.3	9.5	52.08	1.125	15.00	1.500
27X13X1.125/1.750T	102.01	262.4	529.3	9.7	19.4	9.6	53.13	1.125	13.00	1.750
27X12X1.125/2.000T	104.41	266.6	544.3	9.7	19.6	9.6	54.38	1.125	12.00	2.000
27X14X1.125/1.750T	105.37	265.4	558.4	9.6	19.7	9.3	54.88	1.125	14.00	1.750
27X13X1.125/2.000T	108.25	269.8	577.3	9.6	19.9	9.3	56.38	1.125	13.00	2.000
30X15X1.250/1.500T	115.20	335.1	625.0	10.6	20.7	11.1	60.00	1.250	15.00	1.500
30X16X1.250/1.500T	118.08	338.7	653.7	10.6	20.9	10.8	61.50	1.250	16.00	1.500
30X14X1.250/1.750T	119.04	342.1	656.3	10.7	21.8	11.0	62.00	1.250	14.00	1.750
30X17X1.250/1.750T	129.12	352.7	754.5	10.6	21.8	10.2	67.25	1.250	17.00	1.750
30X15X1.250/2.000T	129.60	355.5	751.9	10.6	21.9	10.4	67.50	1.250	15.00	2.000
30X16X1.250/2.000T	133.44	359.0	788.0	10.6	22.2	10.1	69.50	1.250	16.00	2.000
33X17X1.375/1.750T	144.25	445.4	874.5	11.6	23.2	11.8	75.13	1.375	17.00	1.750
33X15X1.375/2.000T	144.73	448.7	872.4	11.6	23.3	12.0	75.38	1.375	15.00	2.000
33X16X1.375/2.000T	148.57	453.4	913.1	11.6	23.6	11.7	77.38	1.375	16.00	2.000
33X17X1.375/2.000T	152.41	457.7	954.0	11.6	23.8	11.4	79.38	1.375	17.00	2.000
36X16X1.500/1.750T	157.44	546.3	966.3	12.6	24.3	13.7	82.00	1.500	16.00	1.750
36X17X1.500/1.750T	160.80	552.1	1005.6	12.6	24.5	13.5	83.75	1.500	17.00	1.750
36X15X1.500/2.000T	161.28	555.7	1003.8	12.7	24.6	13.6	84.00	1.500	15.00	2.000
36X16X1.500/2.000T	165.12	561.9	1048.7	12.7	24.9	13.3	86.00	1.500	16.00	2.000

0.2500 - 1/4 in.



0.281 IN. PLATE (AREA= 1.82 SQ. IN.)

NOMINAL SIZE		WT/FT	SECTION MODULUS			INERTIA	R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
3X 2X	4X 2X		ZPL	ZFL	INERTIA							WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .155/.180T	3X 2X .180/.250T	1.44	4.7	1.5	4.0	1.2	.9	2.6	2.6	.75	3.19	.125	2.00	.188	.43
3X 2X .180/.250T	3X 2X .180/.313T	2.04	4.9	2.0	5.0	1.3	1.0	2.5	1.06	3.25	3.19	.188	2.00	.250	.66
3X 2X .180/.313T	3X 2X .180/.375T	2.28	5.1	2.3	5.7	1.4	1.1	2.5	1.19	3.31	3.31	.188	2.00	.313	.68
4X 2X .180/.250T	4X 2X .180/.313T	2.40	6.7	2.8	9.0	1.7	1.4	3.2	1.25	4.25	4.25	.188	2.00	.250	.85
4X 2X .180/.313T	4X 2X .180/.375T	2.65	6.9	3.3	10.3	1.8	1.5	3.1	1.38	4.31	4.31	.188	2.00	.313	.86
3X 3X .180/.313T	3X 3X .180/.375T	2.88	5.4	3.3	7.3	1.5	1.4	2.2	1.50	3.31	3.31	.188	3.00	.313	.68
4X 3X .180/.313T	4X 3X .180/.375T	3.24	7.3	4.5	12.7	1.9	1.7	2.8	1.69	4.31	4.31	.188	3.00	.313	.86
3X 3X .250/.375T	3X 3X .250/.438T	3.61	5.7	3.9	8.4	1.5	1.5	2.2	1.88	3.38	3.38	.250	3.00	.375	.92
3X 3X .250/.438T	4X 3X .250/.375T	3.96	5.8	4.3	9.2	1.5	1.6	2.1	2.06	3.44	3.44	.250	3.00	.438	.93
4X 3X .250/.375T	4X 3X .250/.438T	4.03	7.6	5.3	14.6	1.9	1.9	2.7	2.13	4.38	4.38	.250	3.00	.375	1.17
5X 3X .250/.313T	4X 3X .250/.438T	4.20	9.3	6.1	20.6	2.3	2.2	3.4	2.19	5.31	5.31	.250	3.00	.313	1.40
4X 3X .250/.438T	4X 3X .250/.500T	4.44	7.8	5.9	15.9	2.0	2.0	2.7	2.31	4.44	4.44	.250	3.00	.438	1.18
5X 3X .250/.375T	4X 3X .250/.500T	4.57	9.6	6.9	22.7	2.3	2.4	3.3	2.38	5.38	5.38	.250	3.00	.375	1.42
6X 3X .250/.313T	5X 3X .250/.438T	4.68	11.4	7.6	30.0	2.7	2.6	4.0	2.44	6.31	6.31	.250	3.00	.313	1.65
5X 3X .250/.438T	6X 3X .250/.375T	4.92	9.9	7.7	24.7	2.4	2.5	3.2	2.56	5.44	5.44	.250	3.00	.438	1.43
6X 3X .250/.375T	6X 3X .250/.500T	5.05	11.7	8.5	32.9	2.7	2.8	3.9	2.63	6.38	6.38	.250	3.00	.375	1.67
6X 3X .250/.500T	7X 3X .250/.375T	5.40	12.0	9.5	35.6	2.8	3.0	3.8	2.81	6.44	6.44	.250	3.00	.438	1.68
6X 4X .250/.438T	6X 4X .250/.500T	5.76	12.1	10.5	37.5	2.8	3.1	3.6	3.00	6.38	6.38	.250	4.00	.375	1.67
6X 4X .250/.500T	7X 4X .250/.375T	6.24	12.4	11.7	40.6	2.8	3.3	3.5	3.25	6.44	6.44	.250	4.00	.438	1.68
5X 4X .313/.500T	6X 4X .313/.500T	6.94	10.7	10.8	31.0	2.4	2.9	2.9	3.56	5.50	5.50	.313	4.00	.500	1.81
7X 4X .313/.375T	6X 4X .313/.500T	7.08	14.9	13.1	53.2	3.1	3.6	4.1	3.69	7.38	7.38	.313	4.00	.375	2.40
6X 4X .313/.500T	7X 4X .313/.500T	7.45	13.1	13.3	44.7	2.8	3.4	3.4	3.88	6.50	6.50	.313	4.00	.500	2.12
7X 4X .313/.438T	6X 4X .313/.563T	7.56	15.2	14.5	57.3	3.2	3.8	4.0	3.94	7.44	7.44	.313	4.00	.438	2.42
6X 4X .313/.563T	7X 4X .313/.500T	7.93	13.3	14.5	47.4	2.8	3.6	3.3	4.13	6.56	6.56	.313	4.00	.563	2.14
7X 4X .313/.500T	6X 5X .313/.500T	8.04	15.6	15.9	61.1	3.2	3.9	3.9	4.19	7.50	7.50	.313	4.00	.500	2.44
6X 5X .313/.500T	7X 4X .313/.563T	8.41	13.4	15.8	49.2	2.8	3.7	3.1	4.38	6.50	6.50	.313	5.00	.500	2.12
7X 5X .313/.563T	8X 4X .375/.438T	9.52	15.9	17.3	64.8	3.2	4.1	3.8	4.44	7.56	7.56	.313	4.00	.563	2.45
8X 4X .375/.438T	7X 5X .313/.563T	9.12	18.4	17.5	78.3	3.5	4.3	4.5	4.75	8.44	8.44	.375	4.00	.438	3.27
7X 5X .313/.563T	8X 4X .375/.500T	9.60	16.3	20.5	71.0	3.2	4.4	3.5	5.00	7.56	7.56	.313	5.00	.563	2.45
8X 4X .375/.500T	9X 4X .375/.438T	9.60	18.8	19.1	83.2	3.5	4.4	4.4	5.00	8.50	8.50	.375	4.00	.500	3.29
8X 4X .375/.563T	8X 4X .375/.500T	9.85	21.2	20.3	101.0	3.8	4.8	5.0	5.13	9.44	9.44	.375	4.00	.438	3.65
10.08	9X 4X .375/.563T	10.08	19.2	20.6	107.1	3.9	4.9	4.9	5.38	9.50	9.50	.375	4.00	.500	3.67
8X 4X .375/.500T	9X 4X .375/.563T	10.33	21.7	22.1	107.1	3.9	4.9	4.9	5.38	9.50	9.50	.375	4.00	.500	3.67
8X 4X .375/.625T	9X 4X .375/.563T	10.56	19.5	22.0	92.3	3.6	4.7	4.2	5.50	8.63	8.63	.375	4.00	.625	3.34
7X 6X .313/.563T	9X 4X .375/.563T	10.63	16.5	23.6	76.2	3.2	4.6	3.2	5.56	7.56	7.56	.313	6.00	.563	2.45
9X 4X .375/.563T	8X 5X .375/.563T	10.81	22.1	23.7	112.7	3.9	5.1	4.8	5.63	9.56	9.56	.375	4.00	.563	3.69
8X 5X .375/.563T	9X 5X .375/.500T	11.16	19.7	24.2	96.2	3.6	4.9	4.0	5.81	8.56	8.56	.375	5.00	.563	3.32
9X 5X .375/.500T	8X 5X .375/.563T	11.29	22.4	25.7	116.9	3.9	5.2	4.6	5.88	9.50	9.50	.375	5.00	.500	3.67
8X 5X .375/.625T	9X 5X .375/.563T	11.77	20.1	26.0	101.0	3.6	5.0	3.9	6.13	8.63	8.63	.375	5.00	.625	3.34
9X 5X .375/.563T	8X 6X .375/.563T	11.94	22.4	27.8	123.2	3.9	5.4	4.4	6.19	9.56	9.56	.375	5.00	.563	3.69
8X 6X .375/.563T	9X 5X .375/.625T	12.25	20.2	27.9	103.4	3.6	5.1	3.7	6.38	8.56	8.56	.375	6.00	.563	3.32
9X 5X .375/.625T	9X 6X .375/.563T	12.48	23.2	29.8	129.2	3.9	5.6	4.3	6.50	9.56	9.56	.375	5.00	.625	3.72
9X 6X .375/.563T	10X 5X .438/.500T	12.36	23.3	31.8	132.3	3.9	5.7	4.2	6.75	9.56	9.56	.375	6.00	.563	3.69
13.21		13.21	26.6	30.0	152.0	4.2	5.7	5.1	6.88	10.50	10.50	.438	5.00	.500	4.72

0.2813 - 9/32 in.

281 IN. PLATE (AREA= 1.82 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	YF	AREA	DEPTH	DIMENSIONS		SHEAR AREA	
		ZPL	ZFL						WEB THICK	FLANGE WIDTH		FLANGE THICK
9X 6X .375/.625T	13.69	23.7	34.1	3.9	5.9	4.1	7.13	9.63	.375	6.00	.625	3.72
10X 5X .438/.563T	13.90	27.1	32.3	4.2	5.9	4.9	7.19	10.56	.438	5.00	.563	4.75
10X 5X .438/.625T	14.40	27.6	34.4	4.2	6.1	4.9	7.50	10.63	.438	5.00	.625	4.78
8X 6X .438/.688T	14.65	21.7	32.5	3.5	5.4	3.6	7.53	8.69	.438	6.00	.688	3.93
9X 5X .438/.750T	14.76	24.9	34.4	3.9	5.8	4.2	7.69	9.75	.438	5.00	.750	4.39
10X 6X .438/.563T	14.88	27.8	36.6	4.2	6.2	4.7	7.75	10.56	.438	6.00	.563	4.75
10X 6X .438/.688T	15.00	28.1	36.7	4.3	6.2	4.8	7.81	10.69	.438	5.00	.688	4.81
10X 6X .438/.625T	15.61	28.3	39.2	4.2	6.3	4.6	8.13	10.63	.438	6.00	.625	4.78
9X 6X .438/.750T	16.20	25.5	39.4	3.9	6.1	3.9	8.44	9.75	.438	6.00	.750	4.39
10X 6X .438/.688T	16.32	28.7	41.9	4.3	6.5	4.5	8.50	10.69	.438	6.00	.688	4.81
9X 7X .438/.688T	16.80	25.5	41.7	3.9	6.2	3.8	8.75	9.69	.438	7.00	.688	4.37
12X 5X .500/.563T	16.92	35.9	41.6	4.8	6.9	6.0	8.81	12.56	.500	5.00	.563	6.42
10X 6X .438/.750T	17.05	29.1	44.6	4.3	6.7	4.4	8.88	10.75	.438	6.00	.750	4.83
12X 5X .500/.625T	17.53	36.6	44.2	4.9	7.1	5.8	9.13	12.63	.500	5.00	.625	6.46
10X 7X .438/.688T	17.64	29.2	47.1	4.2	6.8	4.2	9.13	10.69	.438	7.00	.688	4.81
12X 6X .500/.563T	18.01	36.9	46.8	4.9	7.2	5.7	9.38	12.56	.500	6.00	.563	6.42
12X 5X .500/.688T	18.12	37.2	46.8	4.9	7.2	5.7	9.44	12.69	.500	5.00	.688	6.49
10X 7X .438/.750T	18.49	29.6	50.0	4.2	6.9	4.1	9.63	10.75	.438	7.00	.750	4.83
12X 6X .500/.625T	18.72	37.6	49.9	4.9	7.4	5.5	9.75	12.63	.500	6.00	.625	6.46
9X 8X .438/.750T	19.08	26.2	49.3	3.8	6.5	3.5	9.94	9.75	.438	8.00	.750	4.39
12X 6X .500/.688T	19.45	38.2	52.9	4.9	7.5	5.4	10.13	12.69	.500	6.00	.688	6.49
12X 5X .500/.875T	19.93	38.9	54.4	4.9	7.7	5.5	10.38	12.88	.500	5.00	.875	6.58
12X 6X .500/.750T	20.16	38.8	56.0	4.9	7.7	5.3	10.50	12.75	.500	6.00	.750	6.52
12X 7X .500/.688T	20.76	39.0	59.1	4.9	7.8	5.2	10.81	12.69	.500	7.00	.688	6.49
12X 7X .500/.750T	21.60	39.6	62.0	4.9	8.0	5.0	11.25	12.75	.500	7.00	.750	6.52
14X 6X .563/.625T	22.33	48.7	62.0	5.5	8.4	6.6	11.63	14.63	.563	6.00	.625	8.40
12X 8X .500/.750T	23.04	40.3	69.3	4.9	8.2	4.8	12.00	12.75	.500	8.00	.750	6.52
14X 6X .563/.688T	23.04	49.5	65.6	5.5	8.5	6.4	12.00	14.69	.563	6.00	.688	8.43
12X 7X .500/.875T	23.29	40.6	69.5	4.9	8.3	4.9	12.13	12.88	.500	7.00	.875	6.58
14X 6X .563/.750T	23.77	50.3	69.2	5.6	8.7	6.3	12.38	14.75	.563	6.00	.750	8.46
14X 7X .563/.688T	24.36	50.6	72.7	5.5	8.8	6.1	12.59	14.69	.563	7.00	.688	8.43
12X 8X .500/.875T	24.96	41.3	77.1	4.9	8.6	4.6	13.00	12.88	.500	8.00	.875	6.58
14X 7X .563/.750T	25.21	51.4	76.8	5.6	9.0	6.0	13.13	14.75	.563	7.00	.750	8.46
12X 7X .563/.625T	26.40	43.6	77.2	4.9	8.5	4.8	13.75	13.00	.563	7.00	1.000	7.48
14X 8X .563/.750T	26.65	52.4	84.4	5.6	9.3	5.8	13.88	14.75	.563	8.00	.750	8.46
14X 7X .563/.875T	28.98	52.9	84.7	5.6	9.3	5.8	14.00	14.88	.563	7.00	.875	8.54
12X 8X .563/.625T	28.32	44.3	85.6	4.8	8.7	4.5	14.75	13.00	.563	8.00	1.000	7.48
14X 8X .563/.875T	30.24	54.6	93.5	5.6	9.6	5.5	14.88	14.88	.563	8.00	.875	8.54
14X 9X .563/.750T	30.24	54.6	102.1	5.5	9.9	5.3	15.75	14.88	.563	9.00	.750	8.54
14X 8X .563/.625T	30.49	55.1	102.4	5.6	9.9	5.3	15.88	15.00	.563	8.00	1.000	8.60
14X 7X .563/.625T	31.93	58.1	101.5	5.6	9.8	5.6	16.63	15.13	.625	7.00	1.125	9.63
12X 10X .563/.625T	32.16	45.4	101.6	4.7	9.2	4.1	16.75	13.00	.563	10.00	1.000	7.48
14X 9X .563/.875T	32.41	55.9	112.0	5.5	10.2	5.1	16.88	15.00	.563	9.00	1.000	8.60
12X 9X .563/.625T	33.85	48.1	102.3	4.7	9.1	4.3	17.63	13.13	.625	9.00	1.125	8.38
14X 8X .563/.625T	34.08	59.1	112.1	5.5	10.1	5.3	17.75	15.13	.625	8.00	1.125	9.63

0.2813 - 9/32 in.



0.2813 IN. PLATE (AREA= 1.02 SQ. IN.)

NOMINAL SIZE	WT/LF	SECTION MODULUS			R	YF	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA			DEPTH	WEB THICK	FLANGE WIDTH	THICK
16X 7X .688/1.000T	34.56	72.2	112.9	761.0	6.2	6.7	10.00	.688	7.00	1.000
12X10X .625/1.125T	36.00	48.6	111.1	453.6	4.7	4.1	18.75	.625	10.00	1.125
16X 8X .688/1.000T	36.48	73.7	123.9	798.2	5.2	6.4	19.00	.688	8.00	1.000
16X 7X .688/1.250T	37.92	75.4	129.9	936.7	6.2	6.4	19.00	.688	7.00	1.250
16X 9X .688/1.000T	38.40	74.9	134.9	832.2	6.2	6.2	20.00	.688	9.00	1.000
16X 8X .750/1.000T	39.36	89.7	134.4	1030.9	6.8	7.7	20.50	.750	8.00	.875
14X 9X .688/1.250T	40.09	64.1	133.3	672.2	5.4	5.0	20.88	.688	9.00	1.250
16X10X .688/1.000T	40.32	76.0	145.7	852.9	6.1	5.9	21.00	.688	10.00	1.000
16X 9X .688/1.125T	40.57	76.5	145.5	873.4	6.2	6.0	21.13	.688	9.00	1.125
18X 9X .750/1.000T	41.05	91.3	145.5	1075.2	6.8	7.4	21.38	.750	9.00	.875
18X 8X .750/1.000T	41.28	92.0	145.9	1087.9	6.8	7.5	21.50	.750	8.00	1.000
16X10X .688/1.125T	44.89	78.5	169.4	934.0	6.1	5.5	23.38	.688	10.00	1.125
18X 9X .750/1.000T	45.37	95.8	170.7	1190.9	6.8	7.0	23.63	.750	9.00	1.125
18X11X .750/1.125T	47.04	96.4	182.8	1217.1	6.8	6.7	24.50	.750	11.00	1.000
18X 9X .750/1.250T	47.52	97.7	183.1	1244.3	6.8	6.8	24.75	.750	9.00	1.250
18X11X .750/1.125T	49.69	98.5	197.5	1275.9	6.8	6.5	25.88	.750	11.00	1.125
18X10X .750/1.250T	49.92	99.1	197.8	1298.0	6.8	6.5	26.00	.750	10.00	1.250
18X12X .750/1.125T	51.84	99.7	210.9	1313.6	6.8	6.2	27.00	.750	12.00	1.125
18X11X .750/1.250T	52.32	100.4	212.5	1331.8	6.8	6.3	27.25	.750	11.00	1.250
21X 9X .875/1.125T	54.72	132.9	214.4	1338.4	7.8	8.6	28.50	.875	9.00	1.125
18X 9X .875/1.500T	56.16	110.7	211.4	1437.6	6.8	6.8	29.25	.875	9.00	1.500
21X10X .875/1.125T	56.89	135.1	230.2	1908.1	7.8	8.3	29.63	.875	10.00	1.125
21X 9X .875/1.375T	59.04	138.3	242.7	1996.7	7.8	8.2	30.75	.875	9.00	1.375
21X11X .875/1.125T	59.04	137.1	245.9	1972.9	7.8	8.0	30.75	.875	11.00	1.125
21X12X .875/1.125T	61.21	138.9	261.8	2033.8	7.8	7.8	31.88	.875	12.00	1.125
21X 9X .875/1.500T	61.21	140.8	256.6	2071.2	7.8	8.1	31.88	.875	9.00	1.500
21X10X .875/1.375T	61.69	140.5	261.7	2071.9	7.8	7.9	32.13	.875	10.00	1.375
21X10X .875/1.500T	64.09	143.0	277.2	2148.8	7.8	7.8	33.38	.875	10.00	1.500
21X11X .875/1.375T	64.32	142.5	280.3	2141.0	7.8	7.6	33.50	.875	11.00	1.375
21X11X .875/1.500T	66.97	145.0	237.0	2219.3	7.8	7.5	34.88	.875	11.00	1.500
24X10X1.000/1.125T	67.68	181.5	283.8	2813.4	8.7	9.9	35.25	1.000	13.00	1.125
21X13X .875/1.375T	69.60	145.8	317.5	2264.7	7.7	7.1	36.25	.875	13.00	1.375
24X11X1.000/1.125T	69.85	184.5	301.7	2988.7	8.7	9.6	36.38	1.000	11.00	1.125
21X12X .875/1.500T	69.85	146.7	317.3	2285.0	7.7	7.2	36.38	1.000	12.00	1.500
24X12X1.000/1.125T	72.00	187.1	319.7	2998.8	8.7	9.4	37.50	1.000	12.00	1.125
21X14X .875/1.375T	72.25	147.3	335.5	2319.7	7.7	6.9	37.63	.875	14.00	1.375
24X10X1.000/1.375T	72.48	189.0	319.9	3049.1	8.8	9.5	37.75	1.000	10.00	1.375
21X13X .875/1.500T	72.73	148.3	336.8	2385.1	7.7	7.0	37.88	.875	13.00	1.500
24X10X1.000/1.500T	74.88	192.5	337.7	3160.3	8.8	9.4	39.00	1.000	10.00	1.500
24X11X1.000/1.375T	75.13	192.0	341.3	3152.9	8.8	9.2	39.13	1.000	11.00	1.375
21X14X .875/1.500T	75.61	149.6	356.5	2481.2	7.6	6.7	39.38	.875	14.00	1.500
24X11X1.000/1.500T	77.76	195.4	360.9	3267.7	8.8	9.1	40.50	1.000	11.00	1.500
21X15X .875/1.500T	78.49	150.9	375.8	2453.2	7.6	6.5	40.88	.875	15.00	1.500
24X10X1.000/1.750T	79.68	198.7	372.3	3372.4	8.8	9.1	41.50	1.000	10.00	1.750

0.2813 - 9/32 in.

0.281 IN. PLATE (AREA= 1.82 SQ.IN.)

SECTION MODULUS				***** BEAM DIMENSIONS *****				SHEAR AREA					
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE THICK	FLANGE WIDTH	THICK	AREA
24X13X1.000/1.375T	80.41	196.9	384.5	3341.8	8.7	17.0	8.7	41.88	25.38	1.000	13.00	1.375	25.66
24X12X1.000/1.500T	80.64	198.0	394.0	3367.8	8.8	17.0	8.8	42.00	25.50	1.000	12.00	1.500	25.78
21X16X .975/1.500T	81.37	152.1	395.2	2501.9	7.5	16.5	6.3	42.38	22.50	.875	16.00	1.500	19.93
24X11X1.000/1.750T	83.04	201.6	398.7	3485.4	8.8	17.3	8.7	43.25	25.75	1.000	11.00	1.750	26.03
24X14X1.000/1.375T	83.04	199.1	405.7	3427.4	8.7	17.2	8.4	43.25	25.38	1.000	14.00	1.375	25.66
24X13X1.000/1.500T	83.52	200.3	407.4	3461.9	8.7	17.3	8.5	43.50	25.50	1.000	13.00	1.500	25.78
24X15X1.000/1.375T	85.69	201.2	426.4	3507.4	8.7	17.4	8.2	44.63	25.38	1.000	15.00	1.375	25.66
24X12X1.000/1.750T	86.40	204.2	425.1	3590.2	8.8	17.6	8.4	45.00	25.75	1.000	12.00	1.750	26.03
24X14X1.000/1.500T	86.40	202.5	430.0	3549.1	8.7	17.5	8.3	45.00	25.50	1.000	14.00	1.500	25.78
24X15X1.000/1.500T	89.28	204.4	452.8	3631.2	8.7	17.8	8.0	46.50	25.50	1.000	15.00	1.500	25.78
24X13X1.000/1.750T	89.76	206.5	451.4	3687.6	8.7	17.9	8.2	46.75	25.75	1.000	13.00	1.750	26.03
27X12X1.125/1.375T	90.01	254.9	435.3	4608.1	9.7	18.1	10.6	46.88	28.38	1.125	12.00	1.375	32.24
27X13X1.125/1.375T	92.64	258.2	459.8	4739.6	9.7	18.4	10.3	48.25	28.38	1.125	13.00	1.375	32.24
27X12X1.125/1.500T	92.89	259.5	459.5	4773.0	9.8	18.4	10.4	48.38	28.50	1.125	12.00	1.500	32.38
24X14X1.000/1.750T	93.12	208.6	476.7	3777.4	8.7	18.1	7.9	48.50	25.75	1.000	14.00	1.750	26.03
27X14X1.125/1.375T	95.29	261.4	483.6	4863.2	9.7	18.6	10.1	49.63	28.38	1.125	14.00	1.375	32.24
27X13X1.125/1.500T	95.77	262.8	485.7	4908.5	9.7	18.7	10.1	49.88	28.50	1.125	13.00	1.500	32.38
24X15X1.000/1.750T	96.48	210.5	503.0	3862.5	8.6	18.4	7.7	50.25	25.75	1.000	15.00	1.750	26.03
27X12X1.125/1.750T	98.65	267.8	506.7	5086.1	9.8	19.0	10.0	51.38	28.75	1.125	12.00	1.750	32.66
27X15X1.125/1.500T	101.53	268.8	537.4	5157.1	9.7	19.2	9.6	52.88	28.50	1.125	15.00	1.500	32.38
27X13X1.125/1.750T	102.01	271.1	536.5	5228.9	9.8	19.3	9.7	53.13	28.75	1.125	13.00	1.750	32.66
27X12X1.125/2.000T	104.41	275.4	551.8	5379.4	9.8	19.5	9.7	54.38	29.00	1.125	12.00	2.000	32.94
27X14X1.125/1.750T	105.37	274.2	566.1	5362.8	9.7	19.6	9.5	54.88	28.75	1.125	14.00	1.750	32.66
27X13X1.125/2.000T	108.25	278.7	585.2	5528.1	9.7	19.8	9.4	56.38	29.00	1.125	13.00	2.000	32.94
30X15X1.250/1.500T	115.20	344.5	632.3	7087.9	10.7	20.6	11.2	60.00	31.50	1.250	15.00	1.500	39.73
30X16X1.250/1.500T	118.08	348.2	661.2	7248.5	10.7	20.8	11.0	61.50	31.50	1.250	16.00	1.500	39.73
30X14X1.250/1.750T	119.04	351.7	664.0	7363.8	10.7	20.9	11.1	62.00	31.75	1.250	14.00	1.750	40.04
30X17X1.250/1.750T	129.12	362.4	763.1	7871.0	10.7	21.7	10.3	67.25	31.75	1.250	17.00	1.750	40.04
30X15X1.250/2.000T	129.60	365.3	760.6	7966.6	10.7	21.8	10.5	67.50	32.00	1.250	15.00	2.000	40.35
30X16X1.250/2.000T	133.44	368.8	797.9	8142.0	10.7	22.1	10.2	69.50	32.00	1.250	16.00	2.000	40.35
33X17X1.375/1.750T	144.25	455.9	883.2	10533.1	11.7	23.1	11.9	75.13	34.75	1.375	17.00	1.750	48.17
33X15X1.375/2.000T	144.73	459.1	881.1	10649.3	11.7	23.2	12.1	75.38	35.00	1.375	15.00	2.000	48.51
33X16X1.375/2.000T	148.57	463.9	922.2	10889.6	11.7	23.5	11.8	77.38	35.00	1.375	16.00	2.000	48.51
33X17X1.375/2.000T	152.41	468.3	963.4	11118.4	11.7	23.7	11.5	79.38	35.00	1.375	17.00	2.000	48.51
36X16X1.500/1.750T	157.44	557.3	974.8	13485.0	12.7	24.2	13.8	82.00	37.75	1.500	16.00	1.750	57.05
36X17X1.500/1.750T	160.80	563.2	1014.3	13772.7	12.7	24.5	13.6	83.75	37.75	1.500	17.00	1.750	57.05
36X15X1.500/2.000T	161.28	566.8	1012.6	13911.3	12.7	24.5	13.7	84.00	38.00	1.500	15.00	2.000	57.42
36X16X1.500/2.000T	165.12	573.1	1057.7	14229.0	12.7	24.8	13.5	86.00	38.00	1.500	16.00	2.000	57.42

0.2813 - 9/32 in.



.313 IN. PLATE (AREA= 2.25 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			INERTIA	R	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
3X 2X .125/ .188T	1.44	5.5	1.5	4.2	1.2	1.2	2.7	.75	3.19	.125	2.00	.188	.44
3X 2X .188/ .250T	2.04	5.7	2.0	5.3	1.3	1.3	2.6	1.06	3.25	.168	2.00	.250	.67
3X 2X .188/ .313T	2.28	6.0	2.4	6.2	1.3	1.3	2.6	1.19	3.31	.168	2.00	.313	.68
4X 2X .188/ .250T	2.40	7.3	2.9	9.7	1.7	1.7	3.3	1.25	4.25	.168	2.00	.250	.86
4X 2X .188/ .313T	2.65	8.2	3.4	11.0	1.7	1.7	3.3	1.38	4.31	.168	2.00	.313	.87
3X 3X .188/ .313T	2.88	6.4	3.3	8.0	1.5	1.5	2.4	1.50	3.31	.188	3.00	.313	.68
4X 3X .188/ .313T	3.24	8.6	4.6	13.8	1.9	1.6	3.0	1.69	4.31	.188	3.00	.313	.87
3X 3X .250/ .375T	3.61	6.7	4.0	9.2	1.5	1.4	2.3	1.88	3.38	.250	3.00	.375	.92
3X 3X .250/ .438T	3.96	6.9	4.4	10.1	1.5	1.5	2.3	2.06	3.44	.250	3.00	.438	.94
4X 3X .250/ .375T	4.09	9.0	5.5	15.9	1.9	1.8	2.9	2.13	4.38	.250	3.00	.375	1.17
5X 3X .250/ .313T	4.20	11.0	6.2	22.4	2.2	2.0	3.6	2.19	5.31	.250	3.00	.313	1.41
4X 3X .250/ .438T	4.44	9.2	6.1	17.4	2.0	1.9	2.9	2.31	4.44	.250	3.00	.438	1.19
5X 3X .250/ .375T	4.57	11.4	7.0	24.7	2.3	2.2	3.5	2.38	5.38	.250	3.00	.375	1.42
6X 3X .250/ .313T	4.68	13.4	7.8	32.6	2.6	2.4	4.2	2.44	6.31	.250	3.00	.313	1.66
5X 3X .250/ .438T	4.92	11.7	7.0	27.0	2.4	2.3	3.4	2.56	5.44	.250	3.00	.438	1.44
6X 3X .250/ .375T	5.05	13.8	8.8	35.8	2.7	2.6	4.1	2.63	6.38	.250	3.00	.375	1.67
6X 4X .250/ .438T	5.40	14.2	9.7	38.9	2.8	2.7	4.0	2.81	6.44	.250	3.00	.438	1.69
6X 4X .250/ .375T	5.76	14.3	10.7	41.1	2.8	2.9	3.8	3.00	6.48	.250	4.00	.375	1.67
6X 4X .250/ .438T	6.24	14.7	12.0	44.6	2.8	3.0	3.7	3.25	6.44	.250	4.00	.438	1.69
5X 4X .313/ .500T	6.44	12.5	11.1	34.2	2.4	2.7	3.1	3.56	5.50	.313	4.00	.500	1.82
7X 4X .313/ .375T	7.08	17.3	13.4	58.1	3.1	3.4	4.3	3.69	7.38	.313	4.00	.375	2.41
6X 4X .313/ .500T	7.45	15.3	13.7	49.2	2.8	3.2	3.6	3.88	6.50	.313	4.00	.500	2.13
7X 4X .313/ .438T	7.56	17.7	14.9	62.7	3.2	3.5	4.2	3.94	7.44	.313	4.00	.438	2.43
6X 4X .313/ .563T	7.93	15.6	14.9	52.3	2.9	3.4	3.5	4.13	6.56	.313	4.00	.563	2.15
8X 4X .313/ .500T	8.04	18.1	16.3	67.1	3.2	3.7	4.1	4.19	7.50	.313	4.00	.500	2.45
6X 5X .313/ .500T	8.41	15.7	16.3	54.4	2.9	3.5	3.3	4.38	6.50	.313	5.00	.500	2.13
7X 4X .313/ .563T	8.52	18.5	17.8	71.3	3.3	3.9	4.0	4.44	7.56	.313	4.00	.563	2.46
7X 5X .313/ .500T	9.00	18.6	19.3	74.0	3.3	4.0	3.8	4.59	7.50	.313	5.00	.500	2.45
8X 4X .375/ .438T	9.12	21.2	18.1	85.4	3.5	4.0	4.7	4.75	8.44	.375	4.00	.438	3.28
7X 5X .375/ .563T	9.60	18.9	21.1	78.5	3.3	4.1	3.7	5.00	7.56	.375	5.00	.563	2.46
8X 4X .375/ .500T	9.60	21.7	19.7	90.9	3.5	4.2	4.6	5.00	8.50	.375	4.00	.500	3.30
9X 4X .375/ .438T	9.85	24.3	21.0	109.9	3.9	4.5	5.2	5.13	9.44	.375	4.00	.438	3.66
8X 4X .375/ .563T	10.08	22.1	21.2	96.0	3.6	4.3	4.5	5.25	8.56	.375	4.00	.563	3.33
9X 4X .375/ .500T	10.33	24.9	22.8	116.7	3.9	4.7	5.1	5.38	9.50	.375	4.00	.500	3.68
8X 4X .375/ .625T	10.56	22.5	22.7	101.1	3.6	4.5	4.4	5.50	8.63	.375	4.00	.625	3.35
7X 6X .313/ .563T	10.68	19.3	24.3	84.6	3.3	4.4	3.5	5.56	7.56	.313	6.00	.563	2.46
9X 4X .375/ .563T	10.81	25.3	24.5	122.9	4.0	4.8	5.0	5.63	9.56	.375	4.00	.563	3.70
8X 5X .375/ .563T	11.16	22.7	25.0	105.5	3.6	4.6	4.2	5.81	8.56	.375	5.00	.563	3.33
9X 5X .375/ .500T	11.29	25.6	26.5	127.7	4.0	5.0	4.8	5.88	9.50	.375	5.00	.500	3.68
9X 5X .375/ .625T	11.77	23.1	26.9	111.0	3.6	4.8	4.1	6.13	8.63	.375	5.00	.625	3.35
8X 5X .375/ .563T	11.88	26.1	28.6	134.7	4.0	5.2	4.7	6.19	9.56	.375	5.00	.563	3.70
8X 6X .375/ .563T	12.25	23.2	28.7	113.8	3.6	4.9	4.0	6.38	8.56	.375	6.00	.563	3.33
9X 5X .375/ .625T	12.48	26.5	30.7	141.5	4.0	5.4	4.6	6.50	9.63	.375	5.00	.625	3.73
9X 6X .375/ .563T	12.96	26.7	32.8	145.1	4.0	5.4	4.4	6.75	9.56	.375	6.00	.563	3.70
10X 5X .438/ .500T	13.21	30.1	31.0	165.0	4.3	5.5	5.3	6.88	10.50	.438	5.00	.500	4.74

0.3125 - 5/16 in.

.313 IN. PLATE (AREA= 2.25 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	Y <sub>P</sub>	V <sub>F</sub>	***** BEAM DIMENSIONS *****				SHEAR AREA		
	WT/FT	Z <sub>P</sub>	Z <sub>F</sub>				INERTIA	AREA	DEPTH	WEB THICK		WIDTH	FLANGE THICK
9X 6X .375/.625T	13.69	27.1	35.2	152.2	4.0	5.6	4.3	7.13	9.63	.375	6.00	.625	3.73
10X 5X .438/.563T	13.80	30.7	33.3	173.7	4.3	5.7	5.2	7.19	10.56	.438	5.00	.563	4.76
10X 5X .438/.625T	14.40	31.2	35.5	181.8	4.3	5.8	5.1	7.50	10.63	.438	5.00	.625	4.79
8X 6X .438/.688T	14.65	24.7	33.5	128.1	3.6	5.2	3.8	7.63	8.69	.438	6.00	.688	3.94
9X 5X .438/.750T	14.76	28.3	35.5	158.5	4.0	5.6	4.5	7.69	9.75	.438	5.00	.750	4.41
10X 6X .438/.563T	14.88	31.4	37.8	186.5	4.3	5.9	4.9	7.75	10.56	.438	6.00	.563	4.76
10X 5X .438/.688T	15.00	31.7	37.9	189.9	4.3	6.0	5.0	7.81	10.69	.438	5.00	.688	4.82
10X 6X .438/.750T	15.61	32.0	40.5	195.4	4.3	6.1	4.8	8.13	10.63	.438	6.00	.750	4.79
9X 6X .438/.750T	16.20	28.9	40.7	170.1	4.0	5.9	4.2	8.44	9.75	.438	6.00	.750	4.41
10X 6X .438/.688T	16.32	32.4	43.2	203.8	4.4	6.3	4.7	8.50	10.69	.438	6.00	.688	4.82
9X 7X .438/.688T	16.80	29.0	43.1	173.3	4.0	6.0	4.0	8.75	9.69	.438	7.00	.688	4.38
12X 5X .500/.563T	16.92	40.1	42.9	266.7	4.9	6.7	6.2	8.81	12.56	.500	5.00	.563	6.44
10X 6X .438/.750T	17.05	32.9	46.0	212.3	4.4	6.5	4.6	8.88	10.75	.438	6.00	.750	4.85
12X 5X .500/.625T	17.53	40.8	45.6	278.7	4.9	6.8	6.1	9.13	12.63	.500	5.00	.625	6.47
10X 7X .438/.688T	17.64	33.0	48.6	216.4	4.3	6.5	4.5	9.19	10.69	.438	7.00	.688	4.82
12X 6X .500/.563T	18.01	41.1	48.2	285.7	5.0	6.9	5.9	9.38	12.56	.500	6.00	.563	6.44
12X 5X .500/.688T	18.12	41.5	48.3	290.2	5.0	7.0	6.0	9.44	12.69	.500	5.00	.688	6.50
10X 7X .438/.750T	18.49	33.5	51.7	224.7	4.3	6.7	4.3	9.63	10.75	.438	7.00	.750	4.85
12X 6X .500/.625T	18.72	41.9	51.4	298.7	5.0	7.1	5.8	9.75	12.63	.500	6.00	.625	6.47
9X 8X .438/.750T	19.08	29.8	51.0	189.1	3.9	6.4	3.7	9.94	9.75	.438	8.00	.750	4.41
12X 6X .500/.688T	19.45	42.5	54.6	310.8	5.0	7.3	5.7	10.13	12.69	.500	6.00	.688	6.50
12X 5X .500/.875T	19.93	43.3	56.1	322.3	5.1	7.4	5.7	10.38	12.88	.500	5.00	.875	6.60
12X 6X .500/.750T	20.16	43.2	57.8	322.8	5.0	7.5	5.6	10.50	12.75	.500	6.00	.750	6.53
12X 7X .500/.688T	20.76	43.4	60.9	329.6	5.0	7.6	5.4	10.81	12.69	.500	7.00	.688	6.50
12X 7X .500/.750T	21.60	44.0	64.7	342.3	5.0	7.8	5.3	11.25	12.75	.500	7.00	.750	6.53
14X 6X .563/.625T	22.33	53.5	63.9	435.1	5.6	8.1	6.8	11.63	14.63	.563	6.00	.625	8.41
12X 8X .500/.750T	23.04	44.8	71.4	359.5	5.0	8.0	5.0	12.00	12.75	.500	8.00	.750	6.53
14X 6X .563/.688T	23.04	54.4	67.5	452.0	5.6	8.3	6.7	12.00	14.69	.563	6.00	.688	8.45
12X 7X .500/.875T	23.29	45.2	71.7	365.7	5.0	8.1	5.1	12.13	12.88	.500	7.00	.875	6.60
14X 6X .563/.750T	23.77	55.2	71.2	468.6	5.7	8.5	6.6	12.38	14.75	.563	6.00	.750	8.48
14X 7X .563/.688T	24.36	55.6	74.8	478.7	5.7	8.6	6.4	12.69	14.69	.563	7.00	.688	8.45
12X 8X .500/.875T	24.96	45.9	79.5	383.8	5.0	8.4	4.8	13.00	12.88	.500	8.00	.875	6.60
14X 7X .563/.750T	25.21	56.5	79.0	496.1	5.7	8.8	6.3	13.13	14.75	.563	7.00	.750	8.48
12X 7X .563/1.000T	26.40	48.2	69.7	399.8	5.0	8.3	5.0	13.75	13.00	.563	7.00	1.000	7.49
14X 8X .563/.750T	26.65	57.5	86.8	521.1	5.7	9.1	6.0	13.88	14.75	.563	8.00	.750	8.48
14X 7X .563/.875T	26.88	58.0	87.2	529.2	5.7	9.1	6.1	14.00	14.88	.563	7.00	.875	8.55
12X 8X .563/1.000T	28.32	49.0	88.3	419.2	5.0	8.6	4.8	14.75	13.00	.563	8.00	1.000	7.49
14X 8X .563/.875T	28.57	59.0	96.2	555.7	5.7	9.4	5.8	14.88	14.88	.563	8.00	.875	8.55
14X 9X .563/.875T	30.24	59.9	105.0	579.5	5.7	9.7	5.5	15.75	14.88	.563	9.00	.875	8.55
14X 8X .563/1.000T	30.49	60.4	105.4	587.9	5.7	9.7	5.6	15.88	15.00	.563	8.00	1.000	8.62
14X 7X .625/1.125T	31.93	63.3	104.5	608.9	5.7	9.6	5.8	16.63	15.13	.625	7.00	1.125	9.65
12X 10X .563/1.000T	32.16	50.1	104.9	451.6	4.9	9.0	4.3	16.75	13.00	.563	10.00	1.000	7.49
14X 9X .563/1.000T	32.41	61.2	115.3	612.3	5.7	10.0	5.3	16.88	15.00	.563	9.00	1.000	8.62
12X 9X .625/1.125T	33.85	52.8	105.5	472.9	4.9	9.0	4.5	17.63	13.13	.625	9.00	1.125	8.40
14X 8X .625/1.125T	34.08	64.4	115.3	638.3	5.6	9.9	5.5	17.75	15.13	.625	8.00	1.125	9.65

0.3125 - 5/16 in.



.313 IN. PLATE (AREA= 2.25 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****				SHEAR AREA		
	WT/FT	ZPL	ZFL				INERTIA	DEPTH	THICK	WIDTH		FLANGE THICK	
16X 7X .688/1.000T	34.56	78.0	115.9	806.9	6.3	10.4	7.0	18.00	17.00	.688	7.00	1.000	11.91
12X10X .625/1.125T	36.00	53.4	114.6	489.5	4.8	9.2	4.3	18.75	13.13	.625	10.00	1.125	8.40
16X 8X .688/1.000T	36.48	79.5	127.1	846.7	6.3	10.7	6.7	19.00	17.00	.688	8.00	1.000	11.91
16X 7X .688/1.250T	37.92	81.4	133.4	887.6	6.4	10.9	6.7	19.75	17.25	.688	7.00	1.250	12.08
16X 9X .688/1.000T	38.40	80.8	138.4	883.2	6.3	10.9	6.4	20.00	17.00	.688	9.00	1.000	11.91
18X 8X .750/.875T	39.36	96.0	137.7	1085.6	6.9	11.3	7.9	20.50	18.88	.750	8.00	.875	14.39
14X 9X .688/1.250T	40.09	69.5	137.1	717.7	5.6	10.3	5.2	20.88	15.25	.688	9.00	1.250	10.71
16X10X .688/1.000T	40.32	81.9	149.5	916.3	6.3	11.2	6.1	21.00	17.00	.688	10.00	1.000	11.91
16X 9X .688/1.125T	40.57	82.5	149.4	927.3	6.3	11.2	6.2	21.13	17.13	.688	9.00	1.125	12.00
18X 9X .750/.875T	41.05	97.7	149.0	1132.6	6.9	11.6	7.6	21.38	18.88	.750	9.00	.875	14.39
18X 8X .750/1.000T	41.28	98.4	143.4	1145.8	6.9	11.6	7.7	21.50	19.00	.750	8.00	1.000	14.48
18X10X .688/1.125T	42.72	83.6	161.8	961.7	6.3	11.5	5.9	22.25	17.13	.688	10.00	1.125	12.00
16X11X .688/1.125T	44.89	84.6	173.8	992.7	6.2	11.7	5.7	23.38	17.13	.688	11.00	1.125	12.00
18X 9X .750/1.125T	45.37	102.4	174.8	1255.1	7.0	12.3	7.2	23.63	19.13	.750	9.00	1.125	14.58
18X11X .750/1.000T	47.04	103.0	187.1	1283.3	6.9	12.5	6.9	24.50	19.00	.750	11.00	1.000	14.48
18X 9X .750/1.250T	47.52	104.4	187.5	1311.7	7.0	12.6	7.0	24.75	19.25	.750	9.00	1.250	14.67
18X11X .750/1.125T	49.69	105.2	202.2	1345.6	6.9	12.8	6.7	25.88	19.13	.750	11.00	1.125	14.58
18X10X .750/1.250T	49.92	105.9	202.5	1360.4	6.9	12.8	6.7	26.00	19.25	.750	10.00	1.250	14.67
18X12X .750/1.125T	51.84	106.4	215.9	1385.9	6.9	13.0	6.4	27.00	19.13	.750	12.00	1.125	14.58
18X11X .750/1.250T	52.32	107.2	217.6	1405.1	6.9	13.1	6.5	27.25	19.25	.750	11.00	1.250	14.67
21X 9X .875/1.125T	54.72	140.2	218.8	1918.2	7.9	13.7	8.8	28.50	22.13	.875	9.00	1.125	19.64
18X 9X .875/1.500T	56.16	117.4	216.2	1507.8	6.9	12.8	7.0	29.25	19.50	.875	9.00	1.500	17.34
21X10X .875/1.125T	56.89	142.6	234.9	1991.2	7.9	14.0	8.5	29.63	22.13	.875	10.00	1.125	19.64
21X 9X .875/1.375T	59.04	145.9	247.7	2083.7	7.9	14.3	8.4	30.75	22.38	.875	9.00	1.375	19.86
21X11X .875/1.125T	59.04	144.7	250.9	2059.3	7.9	14.2	8.2	30.75	22.13	.875	11.00	1.125	19.64
21X12X .875/1.125T	61.21	146.5	267.1	2123.3	7.9	14.5	8.0	31.88	22.13	.875	12.00	1.125	19.64
21X 9X .875/1.500T	61.21	148.5	261.9	2161.5	8.0	14.6	8.3	31.88	22.50	.875	9.00	1.500	19.96
21X10X .875/1.375T	61.69	148.2	267.8	2162.7	7.9	14.6	8.1	32.13	22.38	.875	10.00	1.375	19.86
21X10X .875/1.500T	64.09	150.7	282.8	2243.1	7.9	14.9	7.9	33.38	22.50	.875	10.00	1.500	19.96
21X11X .875/1.375T	64.32	150.3	286.0	2235.3	7.9	14.9	7.8	33.50	22.38	.875	11.00	1.375	19.86
21X11X .875/1.500T	66.97	152.8	303.1	2317.3	7.9	15.2	7.6	34.88	22.50	.875	11.00	1.500	19.96
21X10X1.000/1.125T	67.68	189.8	288.8	2913.9	8.8	15.4	10.1	35.25	25.13	1.000	10.00	1.125	25.44
21X13X .875/1.375T	69.60	153.7	323.9	2365.6	7.8	15.4	7.3	36.25	22.38	.875	13.00	1.375	19.86
21X11X1.000/1.125T	69.85	192.8	306.9	3012.7	8.8	15.6	9.8	36.38	25.13	1.000	11.00	1.125	25.44
21X12X .875/1.500T	69.85	154.6	323.7	2386.5	7.9	15.4	7.4	36.38	22.50	.875	12.00	1.500	19.96
21X12X1.000/1.125T	72.00	195.5	325.2	3106.4	8.8	15.9	9.6	37.50	25.13	1.000	12.00	1.125	25.44
21X14X .875/1.375T	72.25	155.2	342.2	2423.5	7.8	15.6	7.1	37.63	22.38	.875	14.00	1.375	19.86
21X10X1.000/1.375T	72.48	197.5	325.5	3158.0	8.9	16.0	9.7	37.75	25.38	1.000	10.00	1.375	25.69
21X13X .875/1.500T	72.73	156.2	343.6	2449.8	7.8	15.7	7.1	37.88	22.50	.875	13.00	1.500	19.96
21X10X1.000/1.500T	74.88	201.0	343.5	3273.3	8.9	16.3	9.5	39.00	25.50	1.000	10.00	1.500	25.81
21X11X1.000/1.375T	75.13	200.5	347.2	3265.9	8.9	16.3	9.4	39.13	25.38	1.000	11.00	1.375	25.69
21X14X .875/1.500T	75.61	157.7	363.7	2509.8	7.8	15.9	6.9	39.38	22.50	.875	14.00	1.500	19.96
21X11X1.000/1.500T	77.76	204.0	367.1	3384.9	8.9	16.6	9.2	40.50	25.50	1.000	11.00	1.500	25.81
21X15X .875/1.500T	78.49	159.0	383.4	2563.9	7.7	16.1	6.7	40.88	22.50	.875	15.00	1.500	19.96
21X10X1.000/1.750T	79.68	207.4	378.7	3493.1	8.9	16.8	9.2	41.50	25.75	1.000	10.00	1.750	26.06

0.3125 - 5/16 in.

313 IN. PLATE (AREA= 2.25 SQ.IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										FLANGE		SHEAR AREA			
WT/FT	ZPL	ZFL'	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WIDTH	THICK	FLANGE	THICK	FLANGE	THICK	FLANGE	THICK	FLANGE	THICK	FLANGE	THICK	FLANGE	THICK	SHEAR AREA	
24X13X1.000/1.375T	80.41	205.6	391.0	3462.5	8.9	16.8	8.9	41.08	25.38	1.000	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	25.69
24X12X1.000/1.500T	80.64	206.7	330.5	3409.1	8.9	16.9	8.9	42.00	25.50	1.000	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	25.81
24X116X .875/1.500T	81.37	160.2	403.2	2615.3	7.7	16.3	6.5	42.38	22.50	.875	16.00	1.500	16.00	1.500	16.00	1.500	16.00	1.500	16.00	1.500	16.00	1.500	16.00	1.500	19.96
24X14X1.000/1.750T	83.04	210.4	405.6	3610.7	8.9	17.2	8.9	43.25	25.75	1.000	11.00	1.750	11.00	1.750	11.00	1.750	11.00	1.750	11.00	1.750	11.00	1.750	11.00	1.750	26.06
24X14X1.000/1.375T	83.04	207.9	412.5	3551.6	8.8	17.1	8.6	43.25	25.38	1.000	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	25.69
24X13X1.000/1.500T	83.52	209.1	414.3	3587.1	8.9	17.2	8.7	43.50	25.50	1.000	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	25.81
24X15X1.000/1.375T	85.69	210.0	433.6	3634.9	8.8	17.3	8.4	44.63	25.38	1.000	15.00	1.375	15.00	1.375	15.00	1.375	15.00	1.375	15.00	1.375	15.00	1.375	15.00	1.375	25.69
24X12X1.000/1.750T	86.40	213.1	432.4	3719.9	8.9	17.5	8.6	45.00	25.75	1.000	12.00	1.750	12.00	1.750	12.00	1.750	12.00	1.750	12.00	1.750	12.00	1.750	12.00	1.750	26.06
24X14X1.000/1.500T	86.40	211.4	437.3	3678.0	8.8	17.4	8.4	45.00	25.50	1.000	14.00	1.500	14.00	1.500	14.00	1.500	14.00	1.500	14.00	1.500	14.00	1.500	14.00	1.500	25.81
24X15X1.000/1.500T	89.28	213.4	460.4	3763.6	8.8	17.6	8.2	46.50	25.50	1.000	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	25.81
24X13X1.000/1.750T	89.76	215.4	459.1	3821.5	8.8	17.7	8.3	46.75	25.75	1.000	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	26.06
27X12X1.125/1.375T	90.01	264.4	441.7	4745.2	9.8	17.9	10.7	46.08	28.38	1.125	12.00	1.375	12.00	1.375	12.00	1.375	12.00	1.375	12.00	1.375	12.00	1.375	12.00	1.375	32.20
27X13X1.125/1.375T	92.64	267.7	466.6	4881.1	9.8	18.2	10.5	48.25	28.38	1.125	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	13.00	1.375	32.20
27X12X1.125/1.500T	92.89	269.0	466.3	4915.0	9.9	18.3	10.5	48.30	28.50	1.125	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	32.41
24X14X1.000/1.750T	93.12	217.7	484.8	3915.1	8.8	18.0	8.1	48.50	25.75	1.000	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	26.06
27X14X1.125/1.375T	95.29	271.0	498.6	5008.6	9.8	18.5	10.2	49.63	28.38	1.125	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	14.00	1.375	32.28
27X13X1.125/1.500T	95.77	272.4	492.8	5055.0	9.8	18.6	10.3	49.08	28.50	1.125	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	13.00	1.500	32.41
24X15X1.000/1.750T	96.48	219.6	511.5	4003.9	8.7	18.2	7.8	50.25	25.75	1.000	15.00	1.750	15.00	1.750	15.00	1.750	15.00	1.750	15.00	1.750	15.00	1.750	15.00	1.750	26.06
27X12X1.125/1.750T	98.65	277.5	514.1	5237.7	9.9	18.9	10.2	51.38	28.75	1.125	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	12.00	1.500	32.70
27X15X1.125/1.500T	101.53	278.6	545.2	5311.8	9.8	19.1	9.7	52.08	28.50	1.125	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	15.00	1.500	32.70
27X13X1.125/1.750T	102.01	280.9	544.3	5385.2	9.9	19.2	9.9	53.13	28.75	1.125	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	13.00	1.750	32.98
27X12X1.125/2.000T	104.41	285.3	559.8	5539.8	9.9	19.4	9.9	54.38	29.00	1.125	12.00	2.000	12.00	2.000	12.00	2.000	12.00	2.000	12.00	2.000	12.00	2.000	12.00	2.000	32.98
27X14X1.125/1.750T	105.37	284.1	574.2	5523.6	9.8	19.4	9.6	54.08	28.75	1.125	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	32.70
30X15X1.250/1.500T	115.20	355.1	640.2	7265.9	10.8	20.5	11.4	60.00	31.50	1.250	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	39.77
30X15X1.250/1.500T	118.08	358.8	669.4	7430.9	10.8	20.7	11.1	61.50	31.50	1.250	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	39.77
30X14X1.250/1.750T	119.04	362.3	672.2	7548.4	10.8	20.8	11.2	62.00	31.75	1.250	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	14.00	1.750	40.08
30X17X1.250/1.750T	129.12	373.3	772.5	8069.7	10.8	21.6	10.4	67.25	31.75	1.250	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	40.08
30X15X1.250/2.000T	129.60	376.3	770.8	8166.9	10.8	21.7	10.6	67.50	32.00	1.250	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	40.39
30X16X1.250/2.000T	133.44	379.8	807.7	8347.4	10.8	22.0	10.3	69.50	32.00	1.250	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	40.39
33X17X1.375/1.750T	144.25	467.6	892.6	10758.1	11.8	23.0	12.1	75.13	34.75	1.375	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	48.21
33X15X1.375/2.000T	144.73	470.9	890.5	10876.1	11.8	23.1	12.2	75.30	35.00	1.375	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	48.55
33X16X1.375/2.000T	148.57	475.7	931.9	11212.9	11.8	23.4	11.9	77.30	35.00	1.375	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	48.55
33X17X1.375/2.000T	152.41	480.2	973.5	11356.1	11.8	23.6	11.7	79.30	35.00	1.375	17.00	2.000	17.00	2.000	17.00	2.000	17.00	2.000	17.00	2.000	17.00	2.000	17.00	2.000	48.55
36X16X1.500/1.750T	157.44	569.6	983.9	13732.0	12.8	24.1	14.0	82.00	37.75	1.500	16.00	1.750	16.00	1.750	16.00	1.750	16.00	1.750	16.00	1.750	16.00	1.750	16.00	1.750	57.09
36X17X1.500/1.750T	160.80	575.7	1023.8	14025.0	12.8	24.4	13.7	83.75	37.75	1.500	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	17.00	1.750	57.09
36X15X1.500/2.000T	161.28	579.3	1022.1	14165.5	12.8	24.5	13.9	84.00	38.00	1.500	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	15.00	2.000	57.47
36X16X1.500/2.000T	165.12	585.6	1067.6	14489.2	12.8	24.7	13.6	86.00	38.00	1.500	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	16.00	2.000	57.47

0.3125 - 5/16 in.



0.344 IN. PLATE (AREA = 2.72 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****				FLANGE		SHEAR AREA		
3X 2X	2X 1X	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
3X 2X	2X 1X	1.44	6.3	1.6	4.4	1.1	.7	2.8	.75	3.19	.125	2.00	.188	.44
3X 2X	2X 1X	2.04	6.6	2.1	5.6	1.2	.9	2.7	1.06	3.25	.188	2.00	.250	.60
3X 2X	2X 1X	2.28	7.0	2.4	6.6	1.3	.9	2.7	1.19	3.31	.188	2.00	.313	.69
4X 2X	2X 1X	2.40	9.1	3.0	10.2	1.6	1.1	3.5	1.25	4.25	.188	2.00	.250	.86
4X 2X	2X 1X	2.65	9.5	3.4	11.7	1.7	1.2	3.4	1.38	4.31	.188	2.00	.313	.87
3X 3X	2X 1X	2.88	7.5	3.4	8.5	1.4	1.1	2.5	1.50	3.31	.188	3.00	.313	.69
4X 3X	2X 1X	3.24	10.1	4.6	14.8	1.8	1.5	3.2	1.69	4.31	.188	3.00	.313	.87
3X 3X	2X 1X	3.61	7.8	4.0	9.9	1.5	1.3	2.5	1.88	3.38	.250	3.00	.375	.93
3X 3X	2X 1X	3.96	8.0	4.5	11.0	1.5	1.4	2.4	2.06	3.44	.250	3.00	.375	.95
4X 3X	2X 1X	4.09	10.5	5.6	17.2	1.9	1.6	3.1	2.13	4.38	.250	3.00	.375	1.11
5X 3X	2X 1X	4.20	12.8	6.4	24.1	2.2	1.9	3.8	2.19	5.31	.250	3.00	.313	1.41
4X 3X	2X 1X	4.44	10.8	6.2	18.8	1.9	1.7	3.0	2.31	4.44	.250	3.00	.438	1.20
5X 3X	2X 1X	4.57	13.2	7.2	26.6	2.3	2.0	3.7	2.38	5.38	.250	3.00	.375	1.43
6X 3X	2X 1X	4.68	15.6	7.9	35.0	2.6	2.2	4.4	2.44	6.31	.250	3.00	.313	1.66
5X 3X	2X 1X	4.92	13.6	8.0	29.2	2.4	2.1	3.6	2.56	5.44	.250	3.00	.438	1.45
6X 3X	2X 1X	5.05	16.0	8.9	38.6	2.7	2.4	4.3	2.63	6.38	.250	3.00	.375	1.68
6X 3X	2X 1X	5.40	16.5	9.9	42.0	2.8	2.5	4.2	2.81	6.44	.250	3.00	.438	1.70
6X 4X	2X 1X	5.76	16.7	11.0	44.5	2.8	2.7	4.1	3.00	6.38	.250	4.00	.375	1.68
6X 4X	2X 1X	6.24	17.1	12.3	48.5	2.9	2.8	3.9	3.25	6.44	.250	4.00	.438	1.70
5X 4X	2X 1X	6.84	14.6	11.4	37.3	2.4	2.6	3.3	3.56	5.50	.313	4.00	.500	1.83
7X 4X	2X 1X	7.08	20.0	13.8	62.9	3.1	3.1	4.6	3.69	7.38	.313	4.00	.375	2.42
6X 4X	2X 1X	7.45	17.7	14.0	53.6	2.8	3.0	3.8	3.88	6.50	.313	4.00	.500	2.14
7X 4X	2X 1X	7.56	20.5	15.2	68.0	3.2	3.3	4.5	3.94	7.44	.313	4.00	.438	2.44
6X 4X	2X 1X	7.93	18.0	15.3	57.1	2.9	3.2	3.7	4.13	6.56	.313	4.00	.563	2.16
7X 4X	2X 1X	8.04	20.9	16.7	72.9	3.2	3.5	4.4	4.19	7.50	.313	4.00	.500	2.46
6X 5X	2X 1X	8.41	18.2	16.7	59.5	2.9	3.3	3.6	4.38	6.50	.313	5.00	.500	2.14
7X 4X	2X 1X	8.52	21.3	18.2	77.7	3.3	3.6	4.3	4.44	7.56	.313	4.00	.563	2.47
7X 5X	2X 1X	9.00	21.5	19.8	80.8	3.3	3.8	4.1	4.69	7.50	.313	5.00	.500	2.46
8X 4X	2X 1X	9.12	24.2	18.6	92.3	3.5	3.8	5.0	4.75	8.44	.375	4.00	.438	3.29
7X 5X	2X 1X	9.60	21.9	21.6	85.9	3.3	3.9	4.8	5.00	7.56	.313	5.00	.563	2.47
8X 4X	2X 1X	9.60	24.8	20.2	98.4	3.6	4.0	4.9	5.00	8.50	.375	4.00	.500	3.32
9X 4X	2X 1X	9.85	27.7	21.5	118.6	3.9	4.3	5.5	5.13	9.44	.375	4.00	.438	3.67
8X 4X	2X 1X	10.08	25.2	21.8	104.1	3.6	4.1	4.8	5.25	8.56	.375	4.00	.563	3.34
9X 4X	2X 1X	10.33	28.3	23.4	126.2	3.9	4.5	5.4	5.38	9.50	.375	4.00	.500	3.69
8X 4X	2X 1X	10.56	25.7	23.4	109.0	3.7	4.3	4.7	5.50	8.63	.375	4.00	.625	3.37
7X 6X	2X 1X	10.68	22.3	24.9	92.9	3.4	4.2	3.7	5.56	7.56	.313	6.00	.563	2.47
9X 4X	2X 1X	10.81	28.9	25.2	133.1	4.0	4.6	5.3	5.63	9.56	.375	4.00	.563	3.71
8X 5X	2X 1X	11.16	26.0	25.6	114.9	3.7	4.4	4.5	5.81	8.56	.375	5.00	.563	3.34
9X 5X	2X 1X	11.29	29.2	27.2	138.5	4.0	4.7	5.1	5.88	9.50	.375	5.00	.500	3.69
8X 5X	2X 1X	11.77	26.4	27.6	121.1	3.7	4.6	4.4	6.13	8.63	.375	5.00	.625	3.37
9X 5X	2X 1X	11.88	29.7	29.4	146.4	4.1	4.9	5.0	6.19	9.56	.375	5.00	.563	3.71
8X 6X	2X 1X	12.25	26.5	29.5	124.3	3.7	4.7	4.2	6.38	8.56	.375	6.00	.563	3.34
9X 5X	2X 1X	12.40	30.2	31.6	154.0	4.1	5.1	4.9	6.50	9.63	.375	5.00	.625	3.74
9X 6X	2X 1X	12.96	30.4	33.7	158.1	4.1	5.2	4.7	6.75	9.56	.375	5.00	.563	3.71
10X 5X	2X 1X	13.21	33.9	31.8	178.2	4.3	5.2	5.6	6.88	10.50	.438	5.00	.500	4.75

0.3438 - 11/32 in.

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM			FLANGE			SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	THICK	AREA
9X 6X .375/ .625T	13.69	30.8	36.2	166.1	4.1	5.4	4.6	7.13	9.63	.375	6.00	.625	3.74		
10X 5X .438/ .563T	13.80	34.6	34.3	187.8	4.4	5.4	5.5	7.19	10.56	.438	5.00	.563	4.78		
10X 5X .438/ .625T	14.40	35.2	36.5	195.8	4.4	5.6	5.4	7.50	10.63	.438	5.00	.625	4.81		
8X 6X .438/ .688T	14.65	28.1	34.5	135.9	3.7	5.0	4.1	7.63	8.69	.438	6.00	.688	3.96		
9X 5X .438/ .750T	14.76	32.0	36.6	172.3	4.1	5.4	4.7	7.69	9.75	.438	5.00	.750	4.42		
10X 6X .438/ .563T	14.88	35.4	38.9	202.1	4.4	5.7	5.2	7.75	10.56	.438	6.00	.563	4.78		
10X 5X .438/ .688T	15.00	35.8	38.9	205.7	4.4	5.8	5.3	7.81	10.69	.438	5.00	.688	4.83		
10X 6X .438/ .625T	15.61	36.0	41.6	212.0	4.4	5.9	5.1	8.13	10.63	.438	6.00	.625	4.81		
9X 6X .438/ .750T	16.20	32.7	41.9	185.5	4.1	5.7	4.4	8.44	9.75	.438	6.00	.750	4.42		
10X 6X .438/ .688T	16.32	36.6	44.4	221.3	4.4	6.1	5.0	8.50	10.69	.438	6.00	.688	4.82		
9X 7X .438/ .688T	16.80	32.8	44.3	189.1	4.1	5.8	4.3	8.75	9.69	.438	7.00	.688	4.39		
10X 5X .500/ .563T	16.92	44.6	44.1	286.4	5.0	6.4	6.5	8.81	12.56	.500	5.00	.563	6.45		
10X 6X .438/ .750T	17.05	37.1	47.4	230.8	4.5	6.2	4.9	8.88	10.75	.438	6.00	.750	4.86		
12X 5X .500/ .625T	17.53	45.4	46.9	299.4	5.0	6.6	6.4	9.13	12.63	.500	5.00	.625	6.49		
12X 7X .438/ .688T	17.64	37.2	50.0	235.5	4.4	6.3	4.7	9.19	10.69	.438	7.00	.688	4.83		
10X 6X .500/ .563T	18.01	45.8	49.6	307.2	5.0	6.7	6.2	9.38	12.56	.500	6.00	.563	6.45		
12X 5X .500/ .688T	18.12	46.2	49.7	312.0	5.1	6.8	6.3	9.44	12.69	.500	5.00	.688	6.52		
12X 7X .438/ .750T	18.49	37.7	53.2	244.8	4.5	6.5	4.6	9.63	10.75	.438	7.00	.750	4.86		
10X 6X .500/ .625T	18.72	46.6	52.9	321.4	5.1	6.9	6.1	9.75	12.63	.500	6.00	.625	6.49		
9X 8X .438/ .750T	19.08	33.7	52.5	207.1	4.0	6.1	3.9	9.94	9.75	.438	8.00	.750	4.42		
12X 6X .500/ .688T	19.45	47.3	56.1	336.7	5.1	7.1	6.0	10.13	12.69	.500	6.00	.688	6.52		
12X 5X .500/ .875T	19.93	48.1	57.7	347.1	5.1	7.2	6.0	10.38	12.88	.500	5.00	.875	6.61		
12X 6X .500/ .750T	20.16	48.0	59.5	347.9	5.1	7.2	5.9	10.50	12.75	.500	6.00	.750	6.55		
12X 7X .500/ .688T	20.76	48.3	62.6	355.4	5.1	7.4	5.7	10.81	12.69	.500	7.00	.688	6.52		
12X 7X .500/ .750T	21.60	49.0	66.5	369.4	5.1	7.5	5.6	11.25	12.75	.500	7.00	.750	6.55		
12X 6X .563/ .625T	22.33	58.9	65.7	464.8	5.7	7.9	7.1	11.63	14.63	.563	6.00	.625	8.43		
12X 8X .500/ .750T	23.04	49.8	73.4	388.5	5.1	7.8	5.3	12.00	12.75	.500	8.00	.750	6.55		
14X 6X .563/ .688T	23.04	59.8	69.4	483.0	5.7	8.1	7								

0.3438 - 11/32 in.



.344 IN. PLATE (AREA = 2.72 SQ.IN.)

SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	THICK	AREA
16X 7X .688/1.000T	34.56	84.3	118.9	855.7	6.4	10.1	7.2	18.00	17.00	.688	7.00	1.000	.688	11.93
12X10X .625/1.125T	36.00	58.6	118.1	527.8	5.0	9.0	4.5	18.75	13.13	.625	10.00	1.125	.625	8.42
16X 8X .688/1.000T	36.48	86.0	130.4	898.5	6.4	10.5	6.9	19.00	17.00	.688	8.00	1.000	.688	11.93
16X 7X .688/1.250T	37.92	87.9	136.9	942.0	6.5	10.7	6.9	19.75	17.25	.688	7.00	1.250	.688	12.10
16X 9X .688/1.000T	38.40	87.3	142.0	937.9	6.4	10.7	6.6	20.00	17.00	.688	9.00	1.000	.688	11.93
18X 8X .750/1.000T	39.36	103.0	141.1	1144.1	7.0	11.1	8.1	20.50	18.00	.750	8.00	.875	.750	14.42
14X 9X .688/1.250T	40.89	75.5	140.9	766.5	5.7	10.2	5.4	20.88	15.25	.688	9.00	1.250	.688	10.73
16X10X .688/1.000T	40.32	88.6	153.3	973.6	6.4	11.0	6.4	21.00	17.00	.688	10.00	1.000	.688	11.93
16X 9X .688/1.125T	40.57	89.2	153.2	985.1	6.4	11.0	6.4	21.13	17.13	.688	9.00	1.125	.688	12.02
18X 9X .750/1.000T	41.05	104.8	152.6	1194.1	7.0	11.4	7.8	21.38	18.00	.750	9.00	.875	.750	14.42
18X 8X .750/1.000T	41.28	105.5	153.0	1207.9	7.1	11.4	7.9	21.50	19.00	.750	8.00	1.000	.750	14.51
16X10X .688/1.125T	42.72	90.4	165.9	1022.3	6.4	11.3	6.2	22.25	17.13	.688	10.00	1.125	.688	12.02
16X11X .688/1.125T	44.89	91.4	178.3	1055.8	6.4	11.6	5.9	23.38	17.13	.688	11.00	1.125	.688	12.02
18X 9X .750/1.125T	45.37	109.7	178.9	1324.1	7.1	12.1	7.4	23.63	19.13	.750	9.00	1.125	.750	14.61
18X11X .750/1.000T	47.04	110.4	191.5	1354.6	7.1	12.3	7.1	24.50	19.00	.750	11.00	1.000	.750	14.51
18X 9X .750/1.250T	47.52	111.8	192.0	1384.3	7.1	12.4	7.2	24.75	19.25	.750	9.00	1.250	.750	14.70
18X11X .750/1.125T	49.69	112.7	206.9	1420.8	7.0	12.6	6.9	25.88	19.13	.750	11.00	1.125	.750	14.61
18X12X .750/1.250T	49.92	113.4	207.4	1436.3	7.1	12.7	6.9	26.00	19.25	.750	10.00	1.250	.750	14.70
18X11X .750/1.125T	51.84	114.0	220.9	1464.0	7.0	12.8	6.6	27.00	19.13	.750	12.00	1.125	.750	14.61
21X 9X .875/1.250T	52.32	114.8	222.7	1484.1	7.0	12.9	6.7	27.25	19.25	.750	11.00	1.250	.750	14.70
21X 9X .875/1.125T	54.72	148.4	223.4	2004.4	8.0	13.5	9.0	28.50	22.13	.875	9.00	1.125	.875	19.66
18X 9X .875/1.500T	56.16	124.9	221.1	1583.8	7.0	12.7	7.2	29.25	19.50	.875	9.00	1.500	.875	17.36
21X10X .875/1.125T	56.89	150.9	239.8	2061.2	8.0	13.8	8.7	29.63	22.13	.875	10.00	1.125	.875	19.66
21X 9X .875/1.375T	59.04	154.3	252.9	2177.8	8.1	14.1	8.6	30.75	22.38	.875	9.00	1.375	.875	19.88
21X11X .875/1.125T	59.04	153.1	256.0	2152.8	8.0	14.1	8.4	30.75	22.13	.875	11.00	1.125	.875	19.66
21X12X .875/1.125T	61.21	155.0	272.5	2220.3	8.0	14.3	8.1	31.88	22.13	.875	12.00	1.125	.875	19.66
21X 9X .875/1.500T	61.21	157.0	267.3	2259.4	8.1	14.4	8.5	31.88	22.50	.875	9.00	1.500	.875	19.99
21X10X .875/1.375T	61.69	156.7	272.5	2261.1	8.1	14.4	8.3	32.13	22.38	.875	10.00	1.375	.875	19.88
21X10X .875/1.500T	64.09	159.4	288.7	2345.5	8.1	14.7	8.1	33.38	22.50	.875	10.00	1.500	.875	19.99
21X11X .875/1.375T	64.32	158.9	291.8	2337.6	8.0	14.7	8.0	33.50	22.38	.875	11.00	1.375	.875	19.88
21X11X .875/1.500T	66.97	161.5	309.3	2423.7	8.0	15.0	7.8	34.88	22.50	.875	11.00	1.500	.875	19.99
24X10X1.000/1.125T	67.68	198.9	294.1	3022.9	8.9	15.2	10.3	35.25	25.13	1.000	10.00	1.125	1.000	25.47
21X13X .875/1.375T	69.60	162.5	330.5	2475.2	8.0	15.2	7.5	36.25	22.38	.875	13.00	1.375	.875	19.88
24X11X1.000/1.125T	69.85	202.0	312.5	3125.8	8.9	15.5	10.0	36.38	25.13	1.000	11.00	1.125	1.000	25.47
21X12X .875/1.500T	69.85	163.4	330.3	2496.8	8.0	15.3	7.6	36.38	22.50	.875	12.00	1.500	.875	19.99
24X12X1.000/1.125T	72.00	204.8	331.0	3223.3	9.0	15.7	9.7	37.50	25.13	1.000	12.00	1.125	1.000	25.47
21X14X .875/1.375T	72.25	164.1	349.1	2536.3	7.9	15.5	7.3	37.63	22.38	.875	14.00	1.375	.875	19.88
24X10X1.000/1.375T	72.48	206.9	331.3	3276.4	9.0	15.8	9.9	37.75	25.38	1.000	10.00	1.375	1.000	25.72
21X13X .875/1.500T	72.73	165.1	350.6	2563.7	7.9	15.5	7.3	37.88	22.50	.875	13.00	1.500	.875	19.99
24X10X1.000/1.500T	74.88	210.5	349.7	3396.1	9.0	16.1	9.7	39.00	25.50	1.000	10.00	1.500	1.000	25.84
24X11X1.000/1.375T	75.13	210.0	353.4	3388.8	9.0	16.1	9.6	39.13	25.38	1.000	11.00	1.375	1.000	25.72
21X14X .875/1.500T	75.61	166.6	371.1	2626.4	7.9	15.8	7.1	39.38	22.50	.875	14.00	1.500	.875	19.99
24X11X1.000/1.500T	77.76	213.6	373.6	3512.6	9.0	16.4	9.4	40.50	25.50	1.000	11.00	1.500	1.000	25.84
21X15X .875/1.500T	78.49	168.0	391.2	2684.4	7.8	16.0	6.9	40.88	22.50	.875	15.00	1.500	.875	19.99
24X10X1.000/1.750T	79.68	217.2	385.5	3624.6	9.1	16.7	9.4	41.50	25.75	1.000	10.00	1.750	1.000	26.09

0.3438 - 11/32 in.

344 IN. PLATE (AREA= 2.72 SQ. IN.)

SECTION MODULUS										***** BEAM DIMENSIONS *****										FLANGE		SHEAR																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
NOMINAL SIZE				WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	W3	THICK	WIDTH	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK	THICK</

0.3438 - 11/32 in.



0.375 IN. PLATE (AREA= 3.23 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS				SHEAR AREA				
WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK	AREA	
3X 2X .125/ .108T	1.44	7.0	1.6	4.6	1.1	.7	2.9	.75	3.19	.125	2.00	.188	.45
3X 2X .188/ .250T	2.04	7.5	2.1	5.9	1.2	.8	2.8	1.06	3.25	.188	2.00	.250	.68
3X 2X .188/ .313T	2.28	7.9	2.5	6.9	1.3	.9	2.8	1.19	3.31	.188	2.00	.313	.69
4X 2X .188/ .250T	2.40	10.4	3.0	10.8	1.5	1.0	3.6	1.25	4.25	.188	2.00	.250	.87
4X 2X .188/ .313T	2.65	10.9	3.5	12.3	1.6	1.1	3.6	1.38	4.31	.188	2.00	.313	.88
3X 3X .188/ .313T	2.88	8.6	3.4	9.1	1.4	1.1	2.6	1.50	3.31	.188	3.00	.313	.69
4X 3X .188/ .313T	3.24	11.6	4.7	15.7	1.8	1.4	3.3	1.69	4.31	.188	3.00	.313	.88
3X 3X .250/ .375T	3.61	9.0	4.1	10.6	1.4	1.2	2.6	1.88	3.38	.250	3.00	.375	.94
3X 3X .250/ .438T	3.96	9.3	4.6	11.7	1.5	1.3	2.5	2.06	3.44	.250	3.00	.438	.95
4X 3X .250/ .375T	4.09	12.1	5.7	18.3	1.8	1.5	3.2	2.13	4.38	.250	3.00	.375	1.19
5X 3X .250/ .313T	4.20	14.8	6.5	25.6	2.2	1.7	4.0	2.19	5.31	.250	3.00	.313	1.42
4X 3X .250/ .438T	4.44	12.4	6.3	20.2	1.9	1.6	3.2	2.31	4.44	.250	3.00	.438	1.20
5X 3X .250/ .375T	4.57	15.2	7.3	28.4	2.2	1.9	3.9	2.38	5.38	.250	3.00	.375	1.44
6X 3X .250/ .313T	4.68	17.9	8.1	37.2	2.6	2.1	4.6	2.44	6.31	.250	3.00	.313	1.67
5X 3X .250/ .438T	4.92	15.7	8.2	31.2	2.3	2.0	3.8	2.56	5.44	.250	3.00	.438	1.45
6X 3X .250/ .375T	5.05	18.4	9.1	41.2	2.6	2.2	4.5	2.63	6.38	.250	3.00	.375	1.69
6X 3X .250/ .438T	5.40	19.0	10.1	44.9	2.7	2.4	4.4	2.81	6.44	.250	3.00	.438	1.70
6X 4X .250/ .375T	5.76	19.2	11.2	47.7	2.8	2.5	4.3	3.00	6.38	.250	4.00	.438	1.70
6X 4X .250/ .438T	6.24	19.7	12.5	52.1	2.8	2.7	4.2	3.25	6.44	.250	4.00	.438	1.70
5X 4X .313/ .500T	6.84	16.7	11.6	40.2	2.4	2.4	3.5	3.56	5.50	.313	4.00	.500	1.84
7X 4X .313/ .375T	7.08	22.8	14.0	67.4	3.1	3.0	4.8	3.69	7.38	.313	4.00	.375	2.43
6X 4X .313/ .500T	7.45	20.3	14.3	57.7	2.8	2.8	4.0	3.88	6.50	.313	4.00	.500	2.15
7X 4X .313/ .438T	7.56	23.4	15.6	73.0	3.2	3.1	4.7	3.94	7.44	.313	4.00	.438	2.45
6X 4X .313/ .563T	7.93	20.7	15.6	61.7	2.9	3.0	4.0	4.13	6.56	.313	4.00	.563	2.17
7X 4X .313/ .500T	8.04	23.9	17.1	78.5	3.3	3.3	4.6	4.19	7.50	.313	4.00	.500	2.46
6X 5X .313/ .500T	8.41	20.8	17.0	64.4	2.9	3.1	3.8	4.38	6.50	.313	5.00	.500	2.15
7X 4X .313/ .563T	8.52	24.4	18.6	83.8	3.3	3.4	4.5	4.44	7.56	.313	4.00	.563	2.48
7X 5X .313/ .500T	9.00	24.6	20.2	87.4	3.3	3.6	4.3	4.69	7.50	.313	5.00	.500	2.46
8X 4X .375/ .438T	9.12	27.5	19.0	99.1	3.5	3.6	5.2	4.75	8.44	.375	4.00	.438	3.31
7X 5X .313/ .563T	9.60	25.0	22.1	93.1	3.4	3.7	4.2	5.00	7.56	.313	5.00	.563	2.48
8X 4X .375/ .500T	9.60	28.1	20.7	105.8	3.6	3.8	5.1	5.00	8.50	.375	4.00	.500	3.33
9X 4X .375/ .438T	9.85	31.4	22.1	127.2	3.9	4.0	5.8	5.13	9.44	.375	4.00	.438	3.68
8X 4X .375/ .563T	10.08	28.7	22.3	112.1	3.6	3.9	5.0	5.25	8.56	.375	4.00	.563	3.35
9X 4X .375/ .500T	10.33	32.1	24.0	135.5	4.0	4.2	5.7	5.38	9.50	.375	4.00	.500	3.70
8X 4X .375/ .625T	10.56	29.2	23.9	118.4	3.7	4.1	4.9	5.50	8.63	.375	4.00	.625	3.38
7X 6X .313/ .563T	10.68	25.5	25.5	101.1	3.4	4.0	4.0	5.56	7.56	.313	6.00	.563	2.48
9X 4X .375/ .563T	10.81	32.7	25.8	143.2	4.0	4.4	5.6	5.81	9.56	.375	5.00	.563	3.73
8X 5X .375/ .563T	11.16	29.5	26.2	124.1	3.7	4.2	4.7	5.81	8.56	.375	5.00	.563	3.35
9X 5X .375/ .500T	11.29	33.0	27.8	149.1	4.0	4.5	5.4	5.88	9.50	.375	5.00	.500	3.70
8X 5X .375/ .625T	11.77	30.0	28.3	131.0	3.7	4.4	4.6	6.13	8.63	.375	5.00	.625	3.38
9X 5X .375/ .563T	11.88	33.6	30.1	157.8	4.1	4.7	5.2	6.19	9.56	.375	5.00	.563	3.73
8X 6X .375/ .563T	12.25	30.1	30.2	134.7	3.7	4.5	4.5	6.38	8.56	.375	6.00	.563	3.35
9X 5X .375/ .625T	12.48	34.2	32.3	166.3	4.1	4.9	5.1	6.50	9.63	.375	5.00	.625	3.75
9X 6X .375/ .563T	12.96	34.4	34.5	171.0	4.1	5.0	5.0	6.75	9.56	.375	6.00	.563	3.73
10X 5X .438/ .500T	13.21	38.1	32.6	191.3	4.3	5.0	5.9	6.88	10.50	.438	5.00	.500	4.76

0.3750 - 3/8 in.

0.375 IN. PLATE (AREA= 3.23 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
9X 6X .375/.625T	13.69	34.9	37.1	179.9	4.2	5.2	4.9	7.13	9.63	.375	6.00	.625	3.75
10X 5X .438/.563T	13.80	38.9	35.2	201.8	4.4	5.2	5.7	7.19	10.56	.438	5.00	.563	4.79
10X 5X .438/.625T	14.40	39.5	37.5	211.7	4.4	5.4	5.6	7.50	10.63	.438	5.00	.625	4.82
8X 6X .438/.688T	14.65	31.7	35.4	151.7	3.7	4.8	4.3	7.63	8.69	.438	6.00	.688	3.97
9X 5X .438/.750T	14.76	36.1	37.5	186.2	4.1	5.2	5.0	7.69	9.75	.438	5.00	.750	4.43
10X 6X .438/.563T	14.88	39.8	39.8	217.7	4.5	5.5	5.5	7.75	10.56	.438	6.00	.563	4.79
10X 5X .438/.688T	15.00	40.2	39.9	221.6	4.5	5.5	5.5	7.81	10.69	.438	5.00	.688	4.85
10X 6X .438/.625T	15.61	40.5	42.7	228.6	4.5	5.7	5.4	8.13	10.63	.438	6.00	.625	4.82
10X 6X .438/.750T	16.20	36.8	43.0	200.9	4.1	5.5	5.2	8.44	9.75	.438	6.00	.750	4.43
10X 6X .438/.688T	16.32	41.0	45.6	239.0	4.5	5.8	5.2	8.50	10.69	.438	6.00	.688	4.85
9X 7X .438/.688T	16.80	36.9	45.5	205.1	4.1	5.6	4.5	8.75	9.69	.438	7.00	.688	4.41
12X 5X .500/.563T	16.92	49.6	45.3	306.2	5.0	6.2	6.8	8.81	12.56	.500	5.00	.563	6.47
12X 5X .500/.750T	17.05	41.6	48.6	249.5	4.5	6.0	5.1	8.88	10.75	.438	6.00	.750	4.87
12X 5X .500/.625T	17.53	50.5	48.2	320.5	5.1	6.4	6.7	9.13	12.63	.500	5.00	.625	6.50
10X 7X .438/.688T	17.64	41.8	51.3	254.8	4.5	6.1	5.0	9.19	10.69	.438	7.00	.688	4.85
12X 6X .500/.563T	18.01	50.9	50.9	329.0	5.1	6.5	6.5	9.38	12.56	.500	6.00	.563	6.47
12X 5X .500/.688T	18.12	51.3	51.0	334.1	5.1	6.5	6.5	9.44	12.69	.500	5.00	.688	6.53
10X 7X .438/.750T	18.49	42.3	54.6	285.2	4.5	6.3	4.9	9.63	10.75	.438	7.00	.750	4.87
12X 6X .500/.625T	18.72	51.7	54.3	344.5	5.2	6.7	6.3	9.75	12.63	.500	6.00	.625	6.50
9X 8X .438/.750T	19.08	37.9	53.9	225.4	4.1	5.9	4.2	9.94	9.75	.438	8.00	.750	4.43
12X 6X .500/.688T	19.45	52.5	57.6	359.0	5.2	6.8	6.2	10.13	12.69	.500	6.00	.688	6.53
12X 5X .500/.875T	19.93	53.4	59.3	372.4	5.2	7.0	6.3	10.38	12.88	.500	5.00	.875	6.63
12X 6X .500/.750T	20.16	53.3	61.0	373.4	5.2	7.0	6.1	10.50	12.75	.500	6.00	.750	6.56
12X 7X .500/.688T	20.76	53.6	64.2	381.7	5.2	7.1	5.9	10.61	12.69	.500	7.00	.688	6.53
12X 7X .500/.750T	21.60	54.3	68.3	397.2	5.2	7.3	5.8	11.25	12.75	.500	7.00	.750	6.56
14X 6X .563/.625T	22.33	64.7	67.4	495.3	5.8	7.7	7.3	11.63	14.63	.563	6.00	.625	8.45
12X 8X .500/.750T	23.04	55.2	75.4	418.3	5.2	7.6	5.6	12.00	14.69	.563	8.00	.750	6.56
14X 6X .563/.688T	23.04	65.7	71.2	514.9	5.8	7.8	7.2	12.38	14.75	.563	6.00	.688	8.48
12X 7X .500/.875T	23.29	55.7	75.8	425.5	5.3	7.6	5.6	12.13	12.88	.563	7.00	.875	6.63
14X 6X .563/.750T	23.77	66.7	75.1	534.3	5.8	8.0	7.1	12.38	14.75	.563	6.00	.750	8.52
14X 7X .563/.688T	24.36	67.2	78.9	546.5	5.9	8.1	6.9	12.69	14.69	.563	7.00	.688	8.48
12X 8X .500/.875T	24.96	56.5	84.0	447.9	5.3	7.9	5.3	13.00	12.88	.563	8.00	.875	6.63
14X 7X .563/.750T	25.21	68.1	83.3	566.9	5.9	8.3	6.8	13.13	14.75	.563	7.00	.750	8.52
12X 7X .563/1.000T	26.40	58.8	84.2	483.0	5.2	7.9	5.5	13.75	13.00	.563	7.00	1.000	7.53
14X 8X .563/.750T	26.65	69.3	91.5	596.6	5.9	8.6	6.5	13.88	14.75	.563	8.00	.750	8.52
14X 7X .563/.875T	26.88	69.9	92.0	605.9	5.9	8.7	6.6	14.00	14.68	.563	7.00	.875	8.59
12X 8X .563/1.000T	28.32	59.7	93.3	605.9	5.2	8.2	5.2	14.75	13.00	.563	8.00	1.000	7.53
14X 8X .563/.875T	28.57	71.1	101.4	637.6	5.9	9.0	6.3	14.88	14.88	.563	8.00	.875	8.59
14X 9X .563/.875T	30.24	72.1	110.7	666.2	5.9	9.2	6.0	15.75	14.88	.563	9.00	.875	8.59
14X 8X .563/1.000T	30.49	72.7	111.2	675.8	5.9	9.3	6.1	15.88	15.00	.563	8.00	1.000	8.66
14X 7X .625/1.125T	31.93	75.5	110.2	694.8	5.9	9.2	6.3	16.63	15.13	.625	7.00	1.125	9.69
12X 10X .563/1.000T	32.16	61.1	110.9	526.9	5.1	8.6	4.7	16.75	13.00	.563	10.00	1.000	7.53
14X 9X .563/1.000T	32.41	73.7	121.6	705.4	5.9	9.6	5.8	16.88	15.00	.563	9.00	1.000	8.66
12X 9X .625/1.125T	33.85	63.7	111.7	547.6	5.1	8.6	4.9	17.63	13.13	.625	9.00	1.125	8.44
14X 8X .625/1.125T	34.08	76.8	121.7	729.7	5.9	9.5	6.0	17.75	15.13	.625	8.00	1.125	9.69

0.3750 - 3/8 in.



0.375 IN. PLATE (AREA= 3.23 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		BEAM DIMENSIONS		SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA
16X 7X .688/1.000T	34.56	91.3	121.9	906.8	6.5	9.9	7.4 18.00
12X10X .625/1.125T	36.00	64.4	121.4	568.0	5.1	8.0	4.7 18.75
16X 8X .688/1.000T	36.43	93.0	133.6	952.8	6.5	10.2	7.1 19.00
16X 7X .688/1.250T	37.92	95.1	140.3	999.0	6.6	10.5	7.1 19.75
16X 9X .688/1.000T	38.40	94.5	145.4	995.2	6.5	10.5	6.8 20.00
18X 8X .750/.875T	39.36	110.6	144.4	1205.6	7.1	10.9	8.4 20.50
14X 9X .688/1.250T	40.09	82.0	144.6	817.8	5.8	10.0	5.7 20.88
16X10X .688/1.000T	40.32	95.8	157.0	1033.8	6.5	10.8	6.6 21.00
16X 9X .688/1.125T	40.57	96.4	157.0	1045.8	6.6	10.8	6.7 21.13
18X 9X .750/.875T	41.05	112.5	156.1	1250.8	7.2	11.2	8.1 21.38
18X 8X .750/1.000T	41.28	113.3	156.6	1273.2	7.2	11.2	8.1 21.50
16X10X .688/1.125T	42.72	97.7	170.0	1086.1	6.5	11.1	6.4 22.25
16X11X .688/1.125T	44.89	98.8	182.6	1122.5	6.5	11.4	6.1 23.38
18X 9X .750/1.125T	45.37	117.6	183.1	1396.9	7.2	11.9	7.6 23.63
18X11X .750/1.000T	47.04	118.4	195.9	1429.9	7.2	12.1	7.3 24.50
18X 9X .750/1.250T	47.52	119.9	196.4	1461.0	7.2	12.2	7.4 24.75
18X11X .750/1.125T	49.69	120.8	211.7	1500.4	7.2	12.4	7.1 25.88
18X10X .750/1.250T	49.92	121.6	212.2	1516.6	7.2	12.5	7.1 26.00
18X12X .750/1.125T	51.94	122.2	226.0	1546.7	7.2	12.7	6.8 27.00
18X11X .750/1.250T	52.32	123.0	227.9	1568.0	7.2	12.7	6.9 27.25
21X 9X .875/1.125T	54.72	157.4	228.1	2095.9	8.1	13.3	9.2 28.50
18X 9X .875/1.500T	56.16	133.0	226.1	1664.5	7.2	12.5	7.4 29.25
21X10X .875/1.125T	56.89	159.9	244.7	2176.7	8.1	13.6	8.9 29.63
21X 9X .875/1.375T	59.04	163.5	258.1	2277.9	8.2	13.9	8.8 30.75
21X11X .875/1.125T	59.04	162.2	261.3	2252.2	8.1	13.9	8.6 30.75
21X12X .875/1.125T	61.21	164.2	278.1	2323.5	8.1	14.1	8.4 31.88
21X 9X .875/1.500T	61.21	166.3	272.8	2363.6	8.2	14.2	8.7 31.88
21X10X .875/1.500T	61.69	166.0	278.1	2365.8	8.2	14.2	8.5 32.13
21X11X .875/1.500T	64.32	168.3	297.8	2446.6	8.2	14.5	8.3 33.38
21X12X .875/1.500T	66.97	171.0	315.6	2537.2	8.2	14.8	8.0 34.88
24X10X1.000/1.125T	67.68	209.0	293.5	3139.3	9.0	15.0	10.5 35.25
21X13X .875/1.375T	69.60	172.0	337.2	2592.2	8.1	15.1	7.7 36.25
24X11X1.000/1.125T	69.85	212.2	318.2	3246.4	9.1	15.3	10.2 36.38
21X12X .875/1.500T	69.85	173.0	337.0	2614.6	8.1	15.1	7.8 36.38
24X12X1.000/1.125T	72.00	215.1	337.0	3348.2	9.1	15.6	9.9 37.50
21X14X .875/1.375T	72.25	173.7	356.2	2656.8	8.1	15.3	7.5 37.63
24X10X1.000/1.375T	72.48	217.2	337.4	3402.9	9.1	15.7	10.1 37.75
21X13X .875/1.500T	72.73	174.7	357.8	2685.4	8.1	15.4	7.5 37.88
24X10X1.000/1.500T	74.88	220.9	358.0	3527.5	9.1	16.0	9.9 39.00
24X11X1.000/1.375T	75.13	220.4	359.8	3520.2	9.1	16.0	9.8 39.13
21X14X .875/1.500T	75.61	176.3	378.7	2751.9	8.0	15.6	7.3 39.38
24X11X1.000/1.500T	77.76	224.1	380.3	3649.1	9.1	16.3	9.6 40.50
21X15X .875/1.500T	78.49	177.8	399.2	2813.4	8.0	15.8	7.0 40.88
24X10X1.000/1.750T	79.68	227.8	392.5	3765.4	9.2	16.5	9.6 41.50

0.3750 - 3/8 in.

0.375 IN. PLATE (AREA= 3.23 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS		FLANGE	THICK	THICK	SHEAR AREA
		ZPL	ZFL						WEB	WIDTH	THICK			
24X13X1.000/1.375T	80.41	225.9	405.0	9.1	16.5	9.2	41.88	25.38	1.000	13.00	1.375	1.000	1.375	25.76
24X12X1.000/1.500T	80.64	227.0	404.5	9.1	16.6	9.3	42.00	25.50	1.000	12.00	1.500	1.000	1.500	25.88
21X16X .875/1.500T	81.37	179.1	419.8	7.9	16.0	6.8	42.38	22.50	.875	16.00	1.500	.875	1.500	28.02
24X11X1.000/1.750T	83.04	231.0	420.2	9.2	16.9	9.3	43.25	25.75	1.000	11.00	1.750	1.000	1.750	26.13
24X14X1.000/1.375T	83.04	228.3	427.2	9.2	16.8	9.0	43.25	25.38	1.000	14.00	1.375	1.000	1.375	25.76
24X13X1.000/1.500T	83.52	229.6	429.1	9.1	16.9	9.0	43.50	25.50	1.000	13.00	1.500	1.000	1.500	25.88
24X15X1.000/1.375T	85.69	230.6	440.9	9.1	17.0	8.7	44.63	25.38	1.000	15.00	1.375	1.000	1.375	25.76
24X12X1.000/1.750T	86.40	233.8	447.9	9.1	17.2	9.0	45.00	25.75	1.000	12.00	1.750	1.000	1.750	26.13
24X14X1.000/1.500T	86.40	232.0	452.8	9.1	17.1	9.0	45.00	25.50	1.000	14.00	1.500	1.000	1.500	25.88
24X15X1.000/1.500T	89.28	234.2	476.7	9.0	17.4	8.5	46.50	25.50	1.000	15.00	1.500	1.000	1.500	25.88
24X13X1.000/1.750T	89.76	236.3	475.5	9.1	17.5	8.7	46.75	25.75	1.000	13.00	1.750	1.000	1.750	26.13
27X12X1.125/1.375T	90.01	286.3	455.6	10.0	17.7	11.1	46.88	28.38	1.125	12.00	1.375	1.125	1.375	32.35
27X13X1.125/1.375T	92.64	269.9	481.1	10.1	17.9	10.8	48.25	28.38	1.125	13.00	1.375	1.125	1.375	32.35
27X12X1.125/1.500T	92.89	291.2	480.9	10.1	18.0	10.9	48.38	28.50	1.125	12.00	1.500	1.125	1.500	32.48
24X14X1.000/1.750T	93.12	238.7	502.1	9.0	17.7	8.4	48.50	25.75	1.000	14.00	1.750	1.000	1.750	26.13
27X14X1.125/1.375T	95.29	293.3	505.8	10.0	18.2	10.6	49.63	28.38	1.125	14.00	1.375	1.125	1.375	32.35
27X13X1.125/1.500T	95.77	294.8	508.1	10.1	18.3	10.6	49.88	28.50	1.125	13.00	1.500	1.125	1.500	32.48
24X15X1.000/1.750T	96.48	240.8	529.7	9.0	18.0	8.2	50.25	25.75	1.000	15.00	1.750	1.000	1.750	26.13
27X12X1.125/1.750T	98.65	300.1	530.1	10.1	18.6	10.5	51.38	28.75	1.125	12.00	1.750	1.125	1.750	32.77
27X15X1.125/1.500T	101.53	301.3	561.9	10.0	18.8	10.1	52.88	28.50	1.125	15.00	1.500	1.125	1.500	32.48
27X13X1.125/1.750T	102.01	303.8	561.2	10.1	18.9	10.2	53.13	28.75	1.125	13.00	1.750	1.125	1.750	32.77
27X12X1.125/2.000T	104.41	308.3	577.3	10.1	19.1	10.2	54.38	29.00	1.125	12.00	2.000	1.125	2.000	33.05
27X14X1.125/1.750T	105.37	307.1	591.9	10.1	19.2	9.9	54.88	28.75	1.125	14.00	1.750	1.125	1.750	32.77
27X13X1.125/2.000T	108.25	311.9	612.1	10.1	19.5	9.9	56.38	29.00	1.125	13.00	2.000	1.125	2.000	33.05
30X15X1.250/1.500T	115.20	379.6	657.4	11.0	20.2	11.7	60.00	31.50	1.250	15.00	1.500	1.250	1.500	39.04
30X16X1.250/1.500T	118.08	383.5	687.3	11.0	20.5	11.4	61.50	31.50	1.250	16.00	1.500	1.250	1.500	39.04
30X14X1.250/1.750T	119.04	367.2	690.3	11.1	20.6	11.5	62.00	31.75	1.250	14.00	1.750	1.250	1.750	40.16
30X17X1.250/1.750T	129.12	398.7	792.9	11.0	21.4	10.7	67.25	31.75	1.250	17.00	1.750	1.250	1.750	40.16
30X15X1.250/2.000T	129.60	401.8	790.5	11.0	21.5	10.9	67.50	32.00	1.250	15.00	2.000	1.250	2.000	40.47
30X16X1.250/2.000T	133.44	405.5	829.1	11.0	21.7	10.6	69.50	32.00	1.250	16.00	2.000	1.250	2.000	40.47
33X17X1.375/1.750T	144.25	494.8	913.3	12.0	22.8	12.3	75.13	34.75	1.375	17.00	1.750	1.375	1.750	48.38
33X15X1.375/2.000T	144.73	498.2	911.3	12.0	22.9	12.5	75.38	35.00	1.375	15.00	2.000	1.375	2.000	48.64
33X16X1.375/2.000T	146.57	503.3	953.6	12.0	23.2	12.2	77.38	35.00	1.375	16.00	2.000	1.375	2.000	48.64
33X17X1.375/2.000T	152.41	507.9	996.0	12.0	23.4	11.9	79.38	35.00	1.375	17.00	2.000	1.375	2.000	48.64
36X16X1.500/1.750T	157.44	598.5	1004.4	13.0	23.9	14.2	82.00	37.75	1.500	16.00	1.750	1.500	1.750	57.19
36X17X1.500/1.750T	168.80	604.7	1044.9	13.0	24.1	14.0	83.75	37.75	1.500	17.00	1.750	1.500	1.750	57.19
36X15X1.500/2.000T	161.28	608.4	1043.2	13.0	24.2	14.1	84.00	38.00	1.500	15.00	2.000	1.500	2.000	57.56
36X16X1.500/2.000T	165.12	615.0	1089.5	13.0	24.5	13.6	86.00	38.00	1.500	16.00	2.000	1.500	2.000	57.56

0.3750 - 3/8 in.



0.4375 - 7/16 in.

0.438 IN. PLATE (AREA= 4.40 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		DIMENSIONS		BEAM		FLANGE		SHEAR		
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	THICK		
9X 6X .375/.625T	13.49	44.1	38.6	207.1	4.2	4.7	7.13	9.63	.375	6.00	.625	3.78
10X 5X .438/.563T	13.30	48.4	36.7	229.4	4.4	4.7	7.19	10.56	.438	5.00	.563	4.82
10X 5X .438/.625T	14.40	49.2	39.1	241.2	4.5	4.9	7.50	10.63	.438	5.00	.625	4.85
8X 6X .438/.688T	14.65	39.9	36.9	175.1	3.8	4.4	7.63	8.69	.438	6.00	.688	4.00
9X 5X .438/.750T	14.76	45.1	39.2	213.5	4.2	4.7	7.69	9.75	.438	5.00	.750	4.46
10X 6X .438/.563T	14.88	49.6	41.5	248.5	4.5	5.0	7.75	10.56	.438	6.00	.563	4.82
10X 5X .438/.688T	15.00	50.0	44.7	253.0	4.6	5.1	7.81	10.69	.438	5.00	.688	4.87
10X 6X .438/.625T	15.61	50.4	44.5	261.6	4.6	5.2	8.13	10.63	.438	6.00	.625	4.85
9X 6X .438/.750T	16.20	46.1	44.9	231.7	4.2	5.0	8.44	9.75	.438	6.00	.750	4.46
10X 6X .438/.688T	16.32	51.1	47.6	274.1	4.6	5.4	8.50	10.69	.438	6.00	.688	4.87
9X 7X .438/.688T	16.88	46.2	47.4	237.1	4.2	5.1	8.75	9.69	.438	7.00	.688	4.44
12X 5X .500/.563T	16.92	60.7	47.4	346.0	5.1	5.7	7.3	8.81	.500	5.00	.563	6.50
10X 6X .438/.750T	17.05	51.8	50.7	286.8	4.6	5.5	5.7	8.88	.438	6.00	.750	4.90
12X 5X .500/.625T	17.53	61.8	50.4	362.6	5.2	5.9	7.2	9.13	.500	5.00	.625	6.53
10X 7X .438/.688T	17.64	52.8	53.5	293.6	4.6	5.6	5.5	9.19	.438	7.00	.688	4.87
12X 6X .500/.563T	18.01	62.2	53.2	372.8	5.2	6.0	7.0	9.38	.500	6.00	.563	6.50
12X 5X .500/.688T	18.12	62.7	53.4	378.6	5.2	6.0	7.1	9.44	.500	5.00	.688	6.56
10X 7X .438/.750T	18.49	52.7	57.0	306.3	4.7	5.8	5.4	9.63	.438	7.00	.750	4.90
12X 6X .500/.625T	18.72	63.3	56.8	391.0	5.3	6.2	6.9	9.75	.500	6.00	.625	6.53
9X 8X .438/.750T	19.08	47.5	56.3	262.4	4.3	5.5	4.7	9.94	.438	8.00	.750	4.46
12X 6X .500/.688T	19.45	64.3	60.2	408.1	5.3	6.4	6.8	10.13	.500	6.00	.688	6.56
12X 5X .500/.875T	19.93	65.3	62.8	423.6	5.4	6.5	6.8	10.38	.500	5.00	.875	6.66
12X 6X .500/.750T	20.16	65.2	63.8	425.2	5.3	6.5	6.7	10.50	.500	6.00	.750	6.59
12X 7X .500/.688T	20.76	65.5	67.1	435.4	5.3	6.6	6.5	10.81	.500	7.00	.688	6.56
12X 7X .500/.750T	21.60	66.4	71.4	453.8	5.4	6.8	6.4	11.25	.500	7.00	.750	6.59
14X 6X .563/.625T	22.33	77.8	70.6	557.7	5.9	7.2	7.9	11.63	.563	6.00	.625	8.48
12X 8X .500/.750T	23.04	67.5	78.8	479.4	5.4	7.1	6.1	12.00	.500	8.00	.750	6.59
14X 6X .563/.688T	23.04	79.0	74.6	580.3	5.9	7.3	7.8	12.00	.563	6.00	.688	8.52
12X 7X .500/.875T	23.29	68.1	79.3	487.7	5.4	7.2	6.2	12.13	.500	7.00	.875	6.66
14X 6X .563/.750T	23.77	80.2	78.6	602.9	6.0	7.5	7.7	12.38	.563	6.00	.750	8.55
14X 7X .563/.688T	24.36	80.7	82.6	617.4	6.0	7.6	7.5	12.69	.563	7.00	.688	8.52
12X 8X .500/.875T	24.96	69.1	87.9	515.1	5.4	7.5	5.9	13.00	.500	8.00	.875	6.66
14X 7X .563/.750T	25.21	81.8	87.2	641.2	6.0	7.8	7.4	13.13	.563	7.00	.750	8.55
12X 7X .563/.1.000T	26.40	71.2	88.3	529.6	5.4	7.4	6.0	13.75	.563	7.00	1.000	7.57
14X 8X .563/.750T	26.65	83.3	95.7	676.3	6.1	8.1	7.1	13.88	.563	8.00	.750	8.55
14X 7X .563/.875T	26.88	83.9	96.3	686.7	6.1	8.2	7.1	14.00	.563	7.00	.875	8.62
12X 8X .563/.1.000T	28.32	72.3	97.8	558.6	5.4	7.7	5.7	14.75	.563	8.00	1.000	7.57
14X 8X .563/.875T	28.57	85.3	106.1	724.5	6.1	8.5	6.8	14.88	.563	8.00	.875	8.62
14X 9X .563/.875T	30.24	86.5	115.8	758.7	6.1	8.8	6.5	15.75	.563	9.00	.875	8.62
14X 8X .563/.1.000T	30.49	87.1	116.5	769.5	6.2	8.8	6.6	15.88	.563	8.00	1.000	8.69
14X 7X .625/.1.125T	31.93	89.8	115.5	786.8	6.1	8.8	6.8	16.63	.625	7.00	1.125	9.73
12X 10X .563/.1.000T	32.16	74.0	116.4	687.7	5.4	8.2	5.2	16.75	.563	10.00	1.000	7.57
14X 9X .563/.1.000T	32.41	88.3	127.4	805.1	6.2	9.1	6.3	16.88	.563	9.00	1.000	8.69
12X 9X .625/.1.125T	33.85	76.5	117.3	628.1	5.3	8.2	5.4	17.63	.625	9.00	1.125	8.48
14X 8X .625/.1.125T	34.08	91.3	127.5	826.3	6.1	9.1	6.5	17.75	.625	8.00	1.125	9.73

0.4375 - 7/16 in.



438 IN. PLATE (AREA= 4.40 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
	WT/FT	ZPL	ZFL						WEB THICK	FLANGE WIDTH	THICK	
16X 7X .688/1.000T	34.56	107.0	127.5	6.7	9.5	8.0	18.00	17.00	.688	7.00	1.000	12.00
12X10X .625/1.125T	36.00	77.3	127.5	5.3	8.4	5.1	18.75	13.13	.625	10.00	1.125	8.48
16X 8X .688/1.000T	36.48	109.0	139.8	6.8	9.8	7.6	19.00	17.00	.688	8.00	1.000	12.00
16X 7X .688/1.250T	37.92	111.3	146.9	6.8	10.1	7.6	19.75	17.25	.688	7.00	1.250	12.17
16X 9X .688/1.000T	38.40	110.7	152.1	6.8	10.1	7.3	20.00	17.00	.688	9.00	1.000	12.00
18X 8X .750/ .875T	39.36	127.8	150.8	7.3	10.5	8.9	20.50	18.88	.750	8.00	.875	14.49
14X 9X .688/1.250T	40.09	96.8	151.7	6.1	9.6	6.1	20.00	15.25	.688	9.00	1.250	10.79
16X10X .688/1.000T	40.32	112.1	164.2	6.8	10.4	7.1	21.00	17.00	.688	10.00	1.000	12.00
16X 9X .688/1.125T	40.57	112.9	164.3	6.8	10.4	7.2	21.13	17.13	.688	9.00	1.125	12.09
18X 9X .750/ .875T	41.05	129.9	163.0	7.4	10.7	8.6	21.38	18.88	.750	9.00	.875	14.49
18X 8X .750/1.000T	41.28	130.8	163.5	7.4	10.8	8.6	21.50	19.00	.750	8.00	1.000	14.58
16X10X .688/1.125T	42.72	114.3	177.9	6.8	10.7	6.9	22.25	17.13	.688	10.00	1.125	12.09
16X11X .688/1.125T	44.89	115.6	131.1	6.7	10.9	6.6	23.38	17.13	.688	11.00	1.125	12.09
18X 9X .750/1.125T	45.37	135.7	191.2	7.4	11.4	8.1	23.63	19.13	.750	9.00	1.125	14.60
18X11X .750/1.000T	47.04	136.6	204.4	7.4	11.7	7.8	24.50	19.13	.750	11.00	1.000	14.58
18X 9X .750/1.250T	47.52	138.2	205.2	7.5	11.8	7.9	24.75	19.25	.750	9.00	1.250	14.77
18X11X .750/1.125T	49.69	139.3	221.0	7.4	12.0	7.6	25.00	19.13	.750	11.00	1.125	14.68
18X10X .750/1.250T	49.92	140.1	221.6	7.5	12.1	7.6	26.00	19.25	.750	10.00	1.250	14.77
18X12X .750/1.125T	51.84	140.8	235.9	7.4	12.3	7.3	27.00	19.13	.750	12.00	1.125	14.68
18X11X .750/1.250T	52.32	141.7	238.0	7.4	12.3	7.3	27.25	19.25	.750	11.00	1.250	14.77
21X 9X .875/1.125T	54.72	177.7	237.4	8.3	12.9	9.7	28.50	22.13	.875	9.00	1.125	19.75
18X 9X .875/1.500T	56.16	151.4	235.9	7.4	12.1	7.8	29.25	19.50	.875	9.00	1.500	17.45
21X10X .875/1.125T	56.89	180.5	254.7	8.4	13.2	9.4	29.63	22.13	.875	10.00	1.125	19.75
21X 9X .875/1.375T	59.04	184.4	268.7	8.4	13.5	9.3	30.75	22.38	.875	9.00	1.375	19.97
22X11X .875/1.125T	59.04	183.0	271.8	8.4	13.5	9.1	30.75	22.13	.875	11.00	1.125	19.75
21X12X .875/1.125T	61.21	185.2	289.2	8.4	13.8	8.8	31.88	22.13	.875	12.00	1.125	19.75
21X 9X .875/1.500T	61.21	187.4	284.0	8.4	13.8	9.1	31.88	22.50	.875	9.00	1.500	20.07
22X10X .875/1.375T	61.69	187.1	289.4	8.4	13.9	9.0	32.13	22.38	.875	10.00	1.375	19.97
22X10X .875/1.500T	64.09	190.1	306.6	8.4	14.2	8.8	33.38	22.50	.875	10.00	1.500	20.07
21X11X .875/1.375T	64.32	189.6	309.8	8.4	14.2	8.7	33.50	22.38	.875	11.00	1.375	19.97
21X11X .875/1.500T	66.97	192.6	328.4	8.4	14.5	8.5	34.88	22.50	.875	11.00	1.500	20.07
24X10X1.000/1.125T	67.68	231.7	310.6	9.3	14.6	10.9	35.25	25.13	1.000	10.00	1.125	25.57
22X13X .875/1.375T	69.60	193.7	350.7	8.4	14.7	8.1	36.25	22.38	.875	13.00	1.375	19.97
24X11X1.000/1.125T	69.85	235.1	329.9	9.3	14.9	10.6	36.38	25.13	1.000	11.00	1.125	25.57
21X12X .875/1.500T	69.85	194.7	350.7	8.4	14.7	8.2	36.38	22.50	.875	12.00	1.500	20.07
24X12X1.000/1.125T	72.00	238.2	349.2	9.3	15.2	10.4	37.50	25.13	1.000	12.00	1.125	25.57
21X14X .875/1.375T	72.25	195.5	370.5	8.3	14.9	7.9	37.63	22.38	.875	14.00	1.375	19.97
24X10X1.000/1.375T	72.48	240.5	349.8	9.3	15.3	10.5	37.75	25.38	1.000	10.00	1.375	25.82
21X13X .875/1.500T	72.73	196.6	372.2	8.4	15.0	7.9	37.88	22.50	.875	13.00	1.500	20.07
24X10X1.000/1.500T	74.88	244.5	369.1	9.4	15.6	10.3	39.00	25.50	1.000	10.00	1.500	25.94
24X11X1.000/1.375T	75.13	244.0	372.9	9.4	15.6	10.2	39.13	25.38	1.000	11.00	1.375	25.82
21X14X .875/1.500T	75.61	198.4	394.0	8.3	15.3	7.7	39.38	22.50	.875	14.00	1.500	20.07
24X11X1.000/1.500T	77.76	248.0	415.3	9.4	15.9	10.0	40.50	25.50	1.000	11.00	1.500	25.94
21X15X .875/1.500T	78.49	200.0	415.3	8.3	15.5	7.5	40.50	22.50	.875	15.00	1.500	20.07
24X10X1.000/1.750T	79.68	251.9	406.9	9.4	16.2	10.0	41.50	25.75	1.000	10.00	1.750	26.19

0.4375 - 7/16 in.

0.438 IN. PLATE (AREA= 4.40 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR	
	WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	AREA	AREA
24X13X1.000/1.375T	80.41	249.9	419.5	4043.4	9.3	16.2	9.6	41.88	25.38	1.000	13.00	1.375	1.375	25.82	25.82
24X12X1.000/1.500T	80.64	251.1	419.1	4072.8	9.4	16.2	9.7	42.00	25.50	1.000	12.00	1.500	1.500	25.94	25.94
21X16X .875/1.500T	81.37	201.4	436.8	3161.6	8.2	15.7	7.2	42.38	22.50	.875	16.00	1.500	1.500	20.07	20.07
24X11X1.000/1.750T	83.04	255.3	435.5	4214.9	9.4	16.5	9.7	43.25	25.75	1.000	11.00	1.750	1.750	26.19	26.19
24X14X1.000/1.375T	83.04	252.5	442.4	4150.4	9.3	16.4	9.4	43.25	25.38	1.000	14.00	1.375	1.375	25.82	25.82
24X13X1.000/1.500T	83.52	253.9	444.5	4191.1	9.4	16.5	9.4	43.50	25.50	1.000	13.00	1.500	1.500	25.94	25.94
24X15X1.000/1.375T	85.69	254.9	464.9	4250.5	9.3	16.7	9.1	44.63	25.38	1.000	15.00	1.375	1.375	25.82	25.82
24X12X1.000/1.750T	86.40	258.4	464.1	4346.5	9.4	16.8	9.4	45.00	25.75	1.000	12.00	1.750	1.750	26.19	26.19
24X14X1.000/1.500T	86.40	256.5	469.0	4300.4	9.3	16.8	9.2	45.00	25.50	1.000	14.00	1.500	1.500	25.94	25.94
24X15X1.000/1.500T	89.28	258.8	493.7	4408.0	9.3	17.0	8.9	46.50	25.50	1.000	15.00	1.500	1.500	25.94	25.94
24X13X1.000/1.750T	89.76	261.1	432.7	4469.2	9.3	17.1	9.1	46.75	25.75	1.000	13.00	1.750	1.750	26.19	26.19
27X12X1.125/1.375T	90.01	312.3	470.5	5400.7	10.3	17.3	11.5	46.88	28.38	1.125	12.00	1.375	1.375	32.42	32.42
27X13X1.125/1.375T	92.64	316.1	496.7	5566.3	10.3	17.6	11.2	48.25	28.38	1.125	13.00	1.375	1.375	32.42	32.42
27X12X1.125/1.500T	92.89	317.4	496.5	5603.3	10.3	17.7	11.3	48.38	28.50	1.125	12.00	1.500	1.500	32.55	32.55
27X14X1.125/1.750T	93.12	263.6	520.2	4582.1	9.3	17.4	8.8	48.50	25.75	1.000	14.00	1.750	1.750	26.19	26.19
27X15X1.125/1.375T	95.29	319.7	522.0	5713.6	10.3	17.9	10.9	49.63	28.38	1.125	14.00	1.375	1.375	32.42	32.42
27X13X1.125/1.500T	95.77	321.3	524.4	5765.7	10.3	17.9	11.0	49.88	28.50	1.125	13.00	1.500	1.500	32.55	32.55
24X15X1.000/1.750T	96.48	265.9	548.8	4698.4	9.3	17.6	8.5	58.25	25.75	1.000	15.00	1.750	1.750	26.19	26.19
27X12X1.125/1.750T	98.65	327.0	547.2	5973.9	10.3	18.3	10.9	51.38	28.75	1.125	12.00	1.750	1.750	32.84	32.84
27X13X1.125/1.500T	101.53	328.2	579.7	6064.1	10.3	18.5	10.5	52.88	28.50	1.125	13.00	1.500	1.500	32.55	32.55
27X13X1.125/1.750T	102.01	330.8	579.2	6145.6	10.3	18.6	10.6	53.13	28.75	1.125	13.00	1.750	1.750	32.84	32.84
27X12X1.125/2.000T	104.41	335.7	595.9	6328.6	10.4	18.8	10.6	54.38	29.00	1.125	12.00	2.000	2.000	33.12	33.12
27X14X1.125/1.750T	105.37	334.4	610.8	6306.8	10.3	18.9	10.3	54.88	28.75	1.125	14.00	1.750	1.750	32.84	32.84
27X13X1.125/2.000T	108.25	339.4	631.8	6500.2	10.3	19.1	10.3	56.38	29.00	1.125	13.00	2.000	2.000	33.12	33.12
30X15X1.250/1.500T	115.20	408.8	676.1	8136.1	11.2	19.9	12.0	60.88	31.50	1.250	15.00	1.500	1.500	39.92	39.92
30X16X1.250/1.500T	118.08	412.9	706.7	8323.2	11.2	20.2	11.8	61.58	31.50	1.250	16.00	1.500	1.500	39.92	39.92
30X14X1.250/1.750T	119.04	416.7	709.9	8451.5	11.3	20.3	11.9	62.88	31.75	1.250	14.00	1.750	1.750	40.23	40.23
30X17X1.250/1.750T	129.12	428.8	815.1	9044.3	11.2	21.1	11.1	67.25	31.75	1.250	17.00	1.750	1.750	40.23	40.23
30X15X1.250/2.000T	129.60	432.0	812.8	9149.8	11.3	21.2	11.3	67.50	32.00	1.250	15.00	2.000	2.000	40.55	40.55
30X16X1.250/2.000T	133.44	435.9	852.4	9355.9	11.3	21.5	11.8	69.50	32.00	1.250	16.00	2.000	2.000	40.55	40.55
33X17X1.375/1.750T	144.25	527.1	936.1	11066.0	12.2	22.5	12.7	75.13	34.75	1.375	17.00	1.750	1.750	48.38	48.38
33X15X1.375/2.000T	144.73	530.6	934.2	11992.8	12.3	22.6	12.8	75.38	35.00	1.375	15.00	2.000	2.000	48.73	48.73
33X16X1.375/2.000T	148.57	535.9	977.4	12268.6	12.2	22.9	12.5	77.38	35.00	1.375	16.00	2.000	2.000	48.73	48.73
33X17X1.375/2.000T	152.41	540.8	1020.8	12528.1	12.2	23.2	12.3	79.38	35.00	1.375	17.00	2.000	2.000	48.73	48.73
36X16X1.500/1.750T	157.44	632.7	1027.1	14958.9	13.2	23.6	14.6	82.00	37.75	1.500	16.00	1.750	1.750	57.20	57.20
36X17X1.500/1.750T	160.80	639.1	1068.3	15270.7	13.2	23.9	14.3	83.75	37.75	1.500	17.00	1.750	1.750	57.20	57.20
36X15X1.500/2.000T	161.28	643.0	1066.8	15420.4	13.2	24.0	14.5	84.00	38.00	1.500	15.00	2.000	2.000	57.66	57.66
36X16X1.500/2.000T	165.12	649.8	1113.9	15774.6	13.2	24.3	14.2	86.00	38.00	1.500	16.00	2.000	2.000	57.66	57.66

0.4375 - 7/16 in.



500 IN. PLATE (AREA= 5.75 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YF	BEAM DIMENSIONS			SHEAR AREA
	WT/FT	ZPL	ZFL			INERTIA	AREA	DEPTH	
3X 2X .125/.100T	1.44	9.6	1.7	.9	3.1	5.2	.75	3.19	.46
3X 2X .100/.250T	2.04	10.7	2.2	1.0	3.1	6.9	1.06	3.25	.71
3X 2X .100/.313T	2.20	11.6	2.6	1.1	3.1	8.1	1.19	3.31	.72
4X 2X .100/.250T	2.40	15.4	3.1	1.3	3.9	12.4	1.25	4.25	.09
4X 2X .100/.313T	2.65	16.4	3.6	1.4	3.9	14.3	1.38	4.31	.90
3X 3X .100/.313T	2.88	13.0	3.6	1.2	3.0	10.8	1.50	3.31	.72
4X 3X .100/.313T	3.24	18.0	4.9	1.6	3.0	18.6	1.69	4.31	.90
3X 3X .250/.375T	3.61	13.8	4.3	1.3	2.9	12.8	1.88	3.38	.97
3X 3X .250/.438T	3.96	14.4	4.9	1.4	2.9	14.4	2.06	3.44	.99
4X 3X .250/.375T	4.09	18.9	6.0	1.7	3.7	22.1	2.13	4.38	1.22
5X 3X .250/.313T	4.20	23.1	6.8	2.0	4.5	30.5	2.19	5.31	1.45
4X 3X .250/.438T	4.44	19.5	6.7	1.7	3.7	24.5	2.31	4.44	1.24
5X 3X .250/.375T	4.57	24.0	7.7	2.1	4.5	34.2	2.38	5.38	1.47
6X 3X .250/.313T	4.68	28.2	8.5	2.3	5.2	44.5	2.44	6.31	1.70
5X 3X .250/.438T	4.92	24.8	8.6	2.1	4.4	37.9	2.56	5.44	1.49
6X 3X .250/.375T	5.05	29.2	9.6	2.4	5.2	49.6	2.63	6.38	1.72
6X 3X .250/.438T	5.40	30.1	10.6	2.5	5.1	54.5	2.81	6.44	1.74
6X 4X .250/.375T	5.76	30.6	11.7	2.6	5.0	58.4	3.00	6.38	1.72
6X 4X .250/.438T	6.24	31.5	13.2	2.7	4.9	64.5	3.25	6.44	1.74
5X 4X .313/.500T	6.84	26.7	12.3	2.3	4.1	50.5	3.56	5.50	1.80
7X 4X .313/.375T	7.08	36.1	14.9	3.0	5.6	83.1	3.63	7.38	2.47
6X 4X .313/.500T	7.45	32.3	15.2	2.7	4.8	72.3	3.88	6.50	2.19
7X 4X .313/.438T	7.56	37.1	16.5	3.1	5.5	90.7	3.94	7.44	2.49
6X 4X .313/.563T	7.93	33.0	16.6	2.8	4.7	77.9	4.13	6.56	2.21
7X 4X .313/.500T	8.04	38.0	18.1	3.1	5.4	98.2	4.19	7.50	2.50
6X 5X .313/.500T	8.41	33.4	18.1	2.8	4.5	82.0	4.38	6.50	2.19
7X 4X .313/.563T	9.52	38.8	19.8	3.2	5.3	105.6	4.44	7.56	2.52
7X 5X .313/.500T	9.00	39.2	21.5	3.3	5.2	110.9	4.69	7.50	2.50
8X 4X .375/.438T	9.12	42.9	20.3	3.4	6.1	123.3	4.75	8.44	3.35
7X 5X .313/.563T	9.60	39.9	23.5	3.3	5.1	119.2	5.00	7.56	2.52
8X 4X .375/.500T	9.60	43.9	22.1	3.5	6.0	132.5	5.00	8.50	3.38
9X 4X .375/.438T	9.85	48.7	23.7	3.8	6.7	158.3	5.13	9.44	3.73
8X 4X .375/.563T	10.08	44.8	23.9	3.6	5.9	141.2	5.25	8.56	3.40
9X 4X .375/.500T	10.33	49.8	25.7	3.9	6.6	169.5	5.38	9.50	3.75
8X 4X .375/.625T	10.56	45.6	25.7	3.7	6.3	149.9	5.50	8.63	3.42
7X 6X .313/.563T	10.68	40.8	27.1	3.4	5.8	131.2	5.56	7.56	2.52
9X 4X .375/.563T	10.81	50.8	27.6	4.0	6.5	180.0	5.63	9.56	3.77
8X 5X .375/.563T	11.16	46.2	28.1	3.7	6.3	158.3	5.81	8.56	3.40
9X 5X .375/.500T	11.29	51.3	29.8	4.0	6.3	188.6	5.88	9.50	3.75
8X 5X .375/.625T	11.77	47.0	30.3	3.8	5.6	168.2	6.13	8.63	3.42
9X 5X .375/.563T	11.88	52.3	32.3	4.1	6.2	200.8	6.13	9.56	3.77
8X 6X .375/.563T	12.25	47.3	32.3	3.8	5.4	173.9	6.38	8.56	3.40
9X 5X .375/.625T	12.48	53.2	34.7	4.2	6.1	212.7	6.50	9.63	3.80
9X 6X .375/.563T	12.96	53.5	36.9	4.2	6.0	219.8	6.75	9.56	3.77
10X 5X .438/.500T	13.21	58.1	35.2	4.4	6.8	241.1	6.88	10.50	4.82

0.5000 - 1/2 in.

500 IN. PLATE (AREA= 5.75 SQ.IN.)

NOMINAL SIZE		WT/FT	SECTION MODULUS		***** BEAM DIMENSIONS *****										SHEAR	
			INCH	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK			
9X 6X	.375/.625	13.53	94.4	39.8	232.8	4.3	4.3	5.9	7.13	9.63	.375	6.00	.625	3.80		
10X 5X	.438/.563	15.50	50.2	37.9	255.6	4.4	4.3	6.7	7.19	10.56	.438	5.00	.563	4.84		
10X 5X	.438/.625	14.40	60.2	40.4	269.2	4.5	4.5	6.7	7.50	10.63	.438	5.00	.625	4.87		
8X 6X	.438/.688	14.65	49.2	38.2	197.6	3.8	4.0	5.2	7.63	8.69	.438	6.00	.688	4.03		
9X 5X	.438/.750	14.76	55.4	40.5	239.8	4.2	4.3	5.9	7.69	9.75	.438	5.00	.750	4.49		
10X 6X	.438/.563	14.88	60.6	42.9	278.0	4.5	4.6	6.5	7.75	10.56	.438	6.00	.563	4.84		
10X 5X	.438/.688	15.00	61.2	43.1	283.0	4.6	4.6	6.6	7.81	10.69	.438	5.00	.688	4.98		
10X 6X	.438/.625	15.61	61.6	46.1	293.4	4.6	4.8	6.4	8.13	10.63	.438	6.00	.625	4.87		
9X 6X	.438/.750	16.20	56.6	46.5	261.6	4.3	4.6	5.6	8.44	9.75	.438	6.00	.750	4.49		
10X 6X	.438/.688	16.32	62.5	47.2	308.1	4.7	4.9	6.3	8.50	10.69	.438	6.00	.688	4.90		
9X 7X	.438/.688	16.80	56.8	49.1	268.2	4.3	4.7	5.5	8.75	9.69	.438	7.00	.688	4.46		
12X 5X	.500/.563	16.92	73.4	49.2	384.5	5.1	5.2	7.8	8.81	12.56	.500	5.00	.563	6.53		
10X 6X	.438/.750	17.05	63.4	52.5	323.2	4.7	5.1	6.2	8.88	10.75	.438	6.00	.750	4.93		
12X 5X	.500/.625	17.53	74.6	52.3	403.7	5.2	5.4	7.7	9.13	12.63	.500	5.00	.625	6.57		
10X 7X	.438/.688	17.64	63.7	55.3	331.4	4.7	5.2	6.8	9.19	10.69	.438	7.00	.688	4.98		
12X 6X	.500/.563	18.01	75.2	55.2	415.6	5.2	5.5	7.5	9.38	12.56	.500	6.00	.563	6.53		
12X 5X	.500/.688	18.12	75.8	55.4	422.1	5.3	5.6	7.6	9.44	12.69	.500	5.00	.688	6.60		
10X 7X	.438/.750	18.49	64.5	59.0	346.6	4.7	5.4	5.9	9.63	10.75	.438	7.00	.750	4.93		
12X 6X	.500/.625	18.72	76.5	58.9	436.7	5.3	5.7	7.4	9.75	12.63	.500	6.00	.625	6.57		
9X 8X	.438/.750	19.08	58.4	58.3	298.9	4.4	5.1	5.1	9.94	9.75	.438	8.00	.750	4.49		
12X 6X	.500/.688	19.45	77.6	62.5	456.6	5.4	5.9	7.3	10.13	12.69	.500	6.00	.688	6.60		
12X 5X	.500/.875	19.93	78.8	64.4	474.3	5.4	6.0	7.4	10.38	12.88	.500	5.00	.875	6.69		
12X 6X	.500/.750	20.16	78.7	66.2	476.4	5.4	6.1	7.2	10.50	12.75	.500	6.00	.750	6.63		
12X 7X	.500/.688	20.76	79.2	69.6	488.6	5.4	6.2	7.0	10.81	12.69	.500	7.00	.688	6.60		
12X 7X	.500/.750	21.60	80.3	74.0	510.3	5.5	6.4	6.9	11.25	12.75	.500	7.00	.750	6.63		
14X 6X	.563/.625	22.33	92.8	73.4	620.1	6.0	6.7	8.4	11.63	14.63	.563	6.00	.625	8.52		
12X 8X	.500/.750	23.04	81.5	81.7	540.7	5.5	6.6	6.6	12.00	12.75	.500	8.00	.750	6.63		
14X 6X	.563/.688	23.04	94.2	77.5	646.0	6.0	6.9	8.3	12.00	14.69	.563	6.00	.688	8.55		
12X 7X	.500/.875	23.29	82.2	82.3	550.2	5.5	6.7	6.7	12.13	12.88	.500	7.00	.875	6.69		
14X 6X	.563/.750	23.77	95.6	81.7	671.9	6.1	7.0	8.2	12.38	14.75	.563	6.00	.750	8.59		
14X 7X	.563/.688	24.36	96.2	85.8	688.9	6.1	7.2	8.0	12.69	14.69	.563	7.00	.688	8.55		
12X 8X	.500/.750	24.96	83.4	91.2	583.1	5.6	7.0	6.4	13.00	12.88	.500	8.00	.750	6.69		
14X 7X	.563/.750	25.21	97.5	90.6	716.4	6.2	7.3	7.9	13.13	14.75	.563	7.00	.750	8.59		
12X 7X	.563/1.000	26.40	85.5	91.8	597.5	5.5	7.0	6.5	13.75	13.00	.563	7.00	1.000	7.60		
14X 8X	.563/.750	26.65	99.2	99.4	757.4	6.2	7.6	7.6	13.88	14.75	.563	8.00	.750	8.59		
14X 7X	.563/.875	26.88	100.0	100.1	769.1	6.2	7.7	7.7	14.00	14.88	.563	7.00	.875	8.66		
12X 8X	.563/1.000	28.32	86.8	101.7	632.1	5.6	7.3	6.2	14.75	13.00	.563	8.00	1.000	7.60		
14X 8X	.563/.875	28.57	101.6	110.3	813.5	6.3	8.0	7.4	14.88	14.88	.563	8.00	.875	8.66		
14X 9X	.563/1.000	30.24	103.1	128.4	853.9	6.3	8.3	7.1	15.75	14.88	.563	9.00	.875	8.66		
14X 8X	.563/1.125	30.49	103.8	121.1	866.2	6.3	8.3	7.2	15.88	15.00	.563	8.00	1.000	8.73		
14X 7X	.625/1.125	31.93	106.3	120.3	882.1	6.3	8.3	7.3	16.63	15.13	.625	7.00	1.125	9.77		
12X 10X	.563/1.000	32.16	88.8	121.1	691.5	5.5	7.8	5.7	16.75	13.00	.563	10.00	1.000	7.60		
14X 9X	.563/1.000	32.41	105.1	132.5	908.5	6.3	8.6	6.9	16.88	15.00	.563	9.00	1.000	8.73		
12X 9X	.625/1.125	33.85	91.2	122.3	712.0	5.5	7.8	5.8	17.63	13.13	.625	9.00	1.125	8.52		
14X 8X	.625/1.125	34.08	108.0	132.8	930.9	6.3	8.6	7.0	17.75	15.13	.625	8.00	1.125	9.77		

0.5000 - 1/2 in.



500 IN. PLATE (AREA= 5.75 SQ. IN.)

NOMINAL SIZE			SECTION MODULUS			R	YP	YF	***** BEAM DIMENSIONS *****			SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	AREA	DEPTH				WEB THICK	FLANGE WIDTH	FLANGE THICK		
16X 7X .688/1.000T	34.56	125.0	132.7	1126.8	6.9	9.0	8.5	18.00	17.00	.688	7.00	1.000	12.04
12X10X .625/1.125T	36.00	92.2	132.9	742.1	5.5	8.0	5.6	18.75	13.13	.625	10.00	1.125	8.52
16X 8X .688/1.000T	36.48	127.3	145.4	1187.9	6.9	9.3	8.2	19.00	17.00	.688	8.00	1.000	12.04
16X 7X .688/1.250T	37.92	129.9	153.0	1247.2	7.0	9.6	8.2	19.75	17.25	.688	7.88	1.250	12.21
16X 9X .688/1.000T	38.40	129.2	158.2	1244.9	7.0	9.6	7.9	20.00	17.00	.688	9.00	1.000	12.04
18X 8X .758/1.875T	39.36	147.6	156.9	1473.9	7.5	10.0	9.4	20.50	18.88	.750	8.00	.875	14.54
14X 9X .688/1.250T	40.09	113.8	158.1	1042.2	6.3	9.2	6.6	20.88	15.25	.688	9.00	1.250	18.84
16X10X .688/1.000T	40.32	130.9	170.8	1297.0	7.0	9.9	7.6	21.00	17.88	.688	10.00	1.000	12.04
16X 9X .688/1.125T	40.57	131.7	171.0	1311.8	7.0	10.0	7.7	21.13	17.13	.688	9.00	1.125	12.13
18X 9X .750/1.875T	41.05	150.0	169.5	1542.4	7.5	10.3	9.1	21.38	18.88	.750	9.00	.875	14.53
18X 8X .750/1.000T	41.28	150.9	170.1	1559.6	7.6	10.3	9.2	21.58	19.00	.750	8.00	1.000	14.63
16X11X .688/1.125T	42.72	133.4	185.1	1366.8	7.0	10.5	7.4	22.25	17.13	.688	10.00	1.125	12.13
16X11X .688/1.125T	44.89	134.8	198.9	1416.8	7.0	10.5	7.1	23.38	17.13	.688	11.00	1.125	12.13
18X 9X .750/1.125T	45.37	136.4	198.9	1718.9	7.6	11.0	8.6	23.63	19.13	.750	9.00	1.125	14.72
18X11X .750/1.000T	47.04	157.5	212.5	1763.8	7.6	11.2	8.3	24.50	19.00	.750	11.00	1.000	14.63
18X 9X .750/1.250T	47.52	159.3	213.4	1801.4	7.7	11.3	8.4	24.75	19.25	.750	9.00	1.250	14.81
18X11X .758/1.125T	49.69	160.5	229.8	1854.9	7.7	11.6	8.1	25.88	19.13	.750	11.00	1.125	14.72
18X10X .750/1.250T	49.92	161.4	230.5	1874.7	7.7	11.6	8.1	26.00	19.25	.750	10.00	1.250	14.81
18X12X .750/1.125T	51.84	162.2	245.3	1916.4	7.6	11.8	7.8	27.00	19.13	.750	12.00	1.125	14.72
18X11X .750/1.250T	52.32	163.2	247.5	1942.8	7.7	11.9	7.8	27.25	19.25	.750	11.00	1.250	14.81
21X 9X .875/1.125T	54.72	201.1	246.6	2506.4	8.6	12.5	10.2	28.50	22.13	.875	9.00	1.125	19.80
18X 9X .875/1.500T	56.16	172.7	245.5	2027.4	7.6	11.7	8.3	29.25	19.50	.875	9.00	1.500	17.50
21X10X .875/1.125T	56.89	204.1	264.4	2606.8	8.6	12.8	9.9	29.63	22.13	.875	10.00	1.125	19.80
21X 9X .875/1.375T	59.04	208.4	279.0	2729.5	8.6	13.1	9.8	30.75	22.38	.875	9.00	1.375	20.02
21X11X .875/1.125T	59.04	206.9	282.1	2790.9	8.6	13.1	9.6	30.75	22.13	.875	11.00	1.125	19.80
21X12X .875/1.125T	61.21	209.3	300.1	2790.5	8.6	13.3	9.3	31.88	22.13	.875	12.00	1.125	19.80
21X 9X .875/1.500T	61.21	211.7	295.0	2834.8	8.7	13.4	9.6	31.88	22.50	.875	9.00	1.500	20.13
21X10X .875/1.375T	61.63	211.4	300.5	2839.7	8.7	13.4	9.4	32.13	22.38	.875	10.00	1.375	20.02
21X10X .875/1.500T	64.09	214.7	318.4	2949.5	8.7	13.7	9.3	33.38	22.50	.875	10.00	1.500	20.13
21X11X .875/1.375T	64.32	214.1	321.6	2941.3	8.7	13.7	9.1	33.50	22.38	.875	11.00	1.375	20.02
21X11X .875/1.500T	66.97	217.4	341.0	3053.6	8.7	14.0	9.0	34.88	22.50	.875	11.00	1.500	20.13
24X10X1.000/1.125T	67.68	257.9	321.8	3669.1	9.5	14.2	11.4	35.25	25.13	1.000	10.00	1.125	25.63
21X13X .875/1.375T	69.60	218.7	364.0	3125.9	8.6	14.3	8.6	36.25	22.38	.875	13.00	1.375	20.02
24X11X1.000/1.125T	69.85	261.6	341.6	3797.1	9.5	14.5	11.1	36.38	25.13	1.000	11.00	1.125	25.63
21X12X .875/1.500T	69.85	219.8	364.1	3152.1	8.6	14.3	8.7	36.38	22.50	.875	12.00	1.500	20.13
24X12X1.000/1.125T	72.00	265.0	361.6	3919.2	9.5	14.8	10.8	37.50	25.13	1.000	12.00	1.125	25.63
21X14X .875/1.375T	72.25	220.7	384.5	3208.1	8.6	14.5	8.3	37.63	22.38	.875	14.00	1.375	20.02
24X10X1.000/1.375T	72.48	267.4	362.3	3981.5	9.6	14.9	11.0	37.75	25.38	1.000	10.00	1.375	25.88
21X13X .875/1.500T	72.73	221.9	386.4	3242.1	8.6	14.6	8.4	37.88	22.50	.875	13.00	1.500	20.13
24X10X1.000/1.500T	74.88	271.7	382.2	4129.4	9.6	15.2	10.8	39.00	25.50	1.000	10.00	1.500	26.00
21X11X .875/1.375T	75.13	271.2	386.1	4122.5	9.6	15.2	10.7	39.13	25.38	1.000	11.00	1.375	25.88
21X14X .875/1.500T	75.61	223.8	409.1	3327.3	8.6	14.9	8.1	39.38	22.50	.875	14.00	1.500	20.13
24X11X1.000/1.500T	77.76	275.5	408.1	4276.2	9.6	15.5	10.5	40.50	25.50	1.000	11.00	1.500	26.00
21X15X .875/1.500T	78.49	225.6	431.2	3406.3	8.5	15.1	7.9	40.88	22.50	.875	15.00	1.500	20.13
24X10X1.000/1.750T	79.68	279.7	421.4	4412.8	9.7	15.8	10.5	41.50	25.75	1.000	10.00	1.750	26.25

0.5000 - 1/2 in.

-500 IN. PLATE (AREA= 5.75 SQ.IN.)

SECTION		MODULUS		INERTIA		R	YP	VF	AREA	DEPTH	WEB THICK	DIMENSIONS		FLANGE		SHEAR	
WT/FT	ZPL	ZFL										WIDTH	THICK	AREA			
80.41	277.6	434.2	4382.6	9.6	15.8	10.1	41.08	25.38	1.000	13.00	1.375	25.88	25.88				
80.64	278.9	433.9	4413.8	9.6	15.8	10.2	42.00	25.50	1.000	12.00	1.500	26.00	26.00				
81.37	227.1	453.5	3481.0	8.5	15.3	7.7	42.38	22.50	.875	16.00	1.500	28.13	28.13				
83.04	283.4	451.0	4568.5	9.7	16.1	10.1	43.25	25.75	1.000	11.00	1.750	26.25	26.25				
83.04	280.4	457.8	4500.9	9.6	16.0	9.8	43.25	25.38	1.000	14.00	1.375	25.88	25.88				
83.52	281.9	460.1	4544.7	9.6	16.1	9.9	43.50	25.50	1.000	13.00	1.500	26.00	26.00				
85.69	283.0	491.0	4611.5	9.6	16.3	9.6	44.63	25.38	1.000	15.00	1.375	25.88	25.88				
86.40	286.7	480.6	4714.0	9.6	16.4	9.8	45.00	25.75	1.000	12.00	1.750	26.25	26.25				
86.40	284.7	485.4	4665.6	9.6	16.4	9.6	45.00	25.50	1.000	14.00	1.500	26.00	26.00				
89.28	287.2	510.9	4780.4	9.6	16.6	9.4	46.50	25.50	1.000	15.00	1.500	26.00	26.00				
89.76	289.7	510.1	4850.1	9.6	16.7	9.5	46.75	25.75	1.000	13.00	1.750	26.25	26.25				
90.01	342.3	485.8	5798.8	10.5	16.9	11.9	46.88	28.38	1.125	12.00	1.375	32.49	32.49				
92.84	346.4	512.7	5969.9	10.5	17.2	11.6	48.25	28.38	1.125	13.00	1.375	32.49	32.49				
92.89	347.8	512.5	6008.8	10.5	17.3	11.7	48.38	28.50	1.125	12.00	1.500	32.63	32.63				
93.12	292.4	538.6	4975.2	9.6	17.0	9.2	48.50	25.75	1.000	14.00	1.750	26.25	26.25				
95.29	350.2	538.7	6129.6	10.5	17.5	11.4	49.63	28.38	1.125	14.00	1.375	32.49	32.49				
95.77	352.0	541.3	6185.0	10.5	17.6	11.4	49.88	28.50	1.125	13.00	1.500	32.63	32.63				
96.48	294.9	588.2	5095.8	9.5	17.3	9.0	50.25	25.75	1.000	15.00	1.750	26.25	26.25				
98.65	358.0	564.9	6409.1	10.6	17.9	11.3	51.38	28.75	1.125	12.00	1.750	32.91	32.91				
101.53	359.3	598.1	6509.5	10.5	18.1	10.9	52.88	28.50	1.125	15.00	1.500	32.63	32.63				
102.01	362.1	597.8	6595.9	10.6	18.2	11.0	53.13	28.75	1.125	13.00	1.750	32.91	32.91				
104.41	367.2	615.2	6783.6	10.6	18.5	11.0	54.38	29.80	1.125	12.00	2.000	33.19	33.19				
105.37	365.9	630.3	6771.4	10.6	18.5	10.7	54.88	28.75	1.125	14.00	1.750	32.91	32.91				
108.25	371.3	652.2	6979.4	10.6	18.8	10.7	56.38	29.00	1.125	13.00	2.000	33.19	33.19				
115.20	442.5	695.7	8654.6	11.5	19.6	12.4	60.00	31.50	1.250	15.00	1.500	40.80	40.80				
118.08	446.8	727.1	8855.4	11.5	19.8	12.2	61.50	31.50	1.250	16.00	1.500	40.80	40.80				
119.04	450.8	730.5	8990.3	11.5	19.9	12.3	62.00	31.75	1.250	14.00	1.750	40.31	40.31				
129.12	463.6	838.4	9628.0	11.5	20.8	11.5	67.25	31.75	1.250	17.00	1.750	40.31	40.31				
129.68	467.0	836.3	9738.5	11.5	20.9	11.6	67.50	32.00	1.250	15.00	2.000	40.63	40.63				
133.44	471.1	876.9	9960.7	11.5	21.1	11.4	69.50	32.00	1.250	16.00	2.000	40.63	40.63				
144.25	564.5	960.4	12532.5	12.4	22.2	13.0	75.13	34.75	1.375	17.00	1.750	48.47	48.47				
144.73	568.2	958.6	12664.6	12.5	22.3	13.2	75.38	35.00	1.375	15.00	2.000	48.81	48.81				
148.57	573.8	1002.8	12956.0	12.5	22.6	12.9	77.38	35.00	1.375	16.00	2.000	48.81	48.81				
152.41	578.9	1047.2	13234.6	12.5	22.9	12.6	79.38	35.00	1.375	17.00	2.000	48.81	48.81				
157.44	672.3	1051.5	15686.6	13.4	23.3	14.9	82.00	37.75	1.500	16.00	1.750	57.38	57.38				
160.80	679.0	1093.5	16023.0	13.4	23.6	14.7	83.75	37.75	1.500	17.00	1.750	57.38	57.38				
161.28	683.0	1092.1	16178.5	13.4	23.7	14.8	84.00	38.00	1.500	15.00	2.000	57.75	57.75				
165.12	690.1	1140.2	16551.6	13.4	24.0	14.5	86.00	38.00	1.500	16.00	2.000	57.75	57.75				

0.5000 - 1/2 in.



.563 IN. PLATE (AREA= 7.20 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			BEAM DIMENSIONS			FLANGE			SHEAR	
WT/FT	ZPL	ZFL	INERTIA	R	VP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
3X 2X .125/.180T	1.44	10.6	1.7	5.5	.8	.5	3.2	3.19	.125	2.00	.188	.47
3X 2X .180/.250T	2.04	12.0	2.3	7.3	.9	.6	3.2	3.25	.188	2.00	.250	.72
3X 2X .180/.313T	2.28	13.1	2.7	8.6	1.0	.7	3.2	3.31	.188	2.00	.313	.73
4X 2X .180/.250T	2.40	17.6	3.2	13.1	1.2	.7	4.1	3.31	.188	2.00	.250	.98
4X 2X .180/.313T	2.65	18.9	3.7	15.1	1.3	.8	4.1	4.31	.188	2.00	.313	.92
3X 3X .180/.313T	2.88	15.1	3.7	11.5	1.1	.8	3.1	3.31	.188	3.00	.313	.73
4X 3X .180/.313T	3.24	21.0	5.0	19.7	1.5	.9	3.9	4.31	.188	3.00	.313	.92
3X 3X .250/.375T	3.61	16.1	4.4	13.7	1.2	.9	3.1	3.38	.250	3.00	.375	.99
3X 3X .250/.438T	3.96	16.9	5.0	15.4	1.3	.9	3.1	3.44	.250	3.00	.438	1.00
4X 3X .250/.375T	4.09	22.3	6.1	23.6	1.6	1.1	3.9	4.38	.250	3.00	.375	1.24
5X 3X .250/.313T	4.20	27.3	6.9	32.5	1.9	1.2	4.7	5.31	.250	3.00	.313	1.47
4X 3X .250/.438T	4.44	23.2	6.8	26.3	1.7	1.1	3.9	4.44	.250	3.00	.438	1.25
5X 3X .250/.375T	4.57	28.5	7.8	36.5	1.9	1.3	4.7	5.38	.250	3.00	.375	1.49
6X 3X .250/.313T	4.68	33.6	8.7	47.4	2.2	1.4	5.5	6.31	.250	3.00	.313	1.72
5X 3X .250/.438T	4.92	29.7	8.7	40.5	2.0	1.4	4.6	6.31	.250	3.00	.438	1.50
6X 3X .250/.375T	5.05	35.0	9.8	53.0	2.3	1.5	5.4	6.38	.250	3.00	.375	1.74
6X 3X .250/.438T	5.40	36.2	10.8	58.3	2.4	1.6	5.4	6.44	.250	3.00	.438	1.75
6X 4X .250/.375T	5.76	36.8	12.0	62.7	2.5	1.7	5.2	6.38	.250	4.00	.375	1.74
6X 4X .250/.438T	6.24	38.0	13.4	69.5	2.6	1.8	5.2	6.44	.250	4.00	.438	1.75
5X 4X .313/.500T	6.84	32.2	12.5	54.7	2.2	1.7	4.4	5.50	.313	4.00	.500	1.90
7X 4X .313/.375T	7.08	43.5	15.2	89.5	2.9	2.1	5.9	7.38	.313	4.00	.375	2.49
6X 4X .313/.500T	7.45	39.1	15.5	78.4	2.7	2.0	5.1	6.50	.313	4.00	.500	2.21
7X 4X .313/.438T	7.56	44.8	16.9	98.0	3.0	2.2	5.8	7.44	.313	4.00	.438	2.50
6X 4X .313/.563T	7.93	40.0	16.9	84.7	2.7	2.1	5.0	6.56	.313	4.00	.563	2.23
7X 4X .313/.500T	8.04	45.9	18.5	106.4	3.0	2.3	5.7	7.50	.313	4.00	.500	2.52
6X 5X .313/.500T	8.41	40.4	18.4	89.5	2.8	2.2	4.8	6.50	.313	5.00	.500	2.21
7X 5X .313/.500T	9.00	47.0	20.2	114.7	3.1	2.4	5.7	7.56	.313	4.00	.563	2.54
8X 4X .375/.438T	9.12	51.7	21.9	120.9	3.2	2.5	5.5	7.50	.313	5.00	.500	2.52
7X 5X .375/.500T	9.60	48.5	24.0	130.4	3.3	2.6	6.4	8.44	.375	4.00	.438	3.38
8X 4X .375/.563T	9.60	53.0	22.7	143.9	3.4	2.7	6.3	8.50	.375	4.00	.500	3.40
9X 4X .375/.438T	9.85	58.7	24.2	171.6	3.7	2.9	7.1	9.44	.375	4.00	.438	3.75
8X 4X .375/.563T	10.08	54.1	24.5	153.7	3.5	2.8	6.3	8.56	.375	4.00	.563	3.42
9X 4X .375/.500T	10.33	60.1	26.3	184.1	3.8	3.1	7.0	9.50	.375	4.00	.500	3.77
8X 4X .375/.625T	10.56	55.1	26.3	163.6	3.6	3.0	6.2	8.63	.375	4.00	.625	3.45
7X 6X .313/.563T	10.68	49.6	27.7	144.4	3.4	2.9	5.2	7.56	.313	6.00	.563	2.54
9X 4X .375/.563T	10.81	61.3	28.3	196.0	3.9	3.2	6.9	9.56	.375	4.00	.563	3.80
8X 5X .375/.563T	11.16	55.9	28.8	173.2	3.6	3.1	6.0	8.56	.375	5.00	.563	3.42
9X 5X .375/.500T	11.29	62.0	30.5	205.8	4.0	3.3	6.7	9.50	.375	5.00	.500	3.77
8X 5X .375/.625T	11.77	56.9	31.0	184.6	3.7	3.2	5.9	8.63	.375	5.00	.625	3.45
9X 5X .375/.563T	11.88	63.2	33.1	219.7	4.0	3.5	6.6	9.56	.375	5.00	.563	3.80
8X 6X .375/.563T	12.25	57.2	33.1	191.3	3.7	3.3	5.8	8.56	.375	6.00	.563	3.42
9X 5X .375/.625T	12.48	64.3	35.5	233.3	4.1	3.6	6.6	9.63	.375	5.00	.625	3.82
9X 6X .375/.563T	12.96	64.8	37.8	241.7	4.2	3.7	6.4	9.56	.375	6.00	.563	3.80
10X 5X .438/.500T	13.21	69.8	36.2	263.5	4.3	3.8	7.3	10.50	.438	5.00	.500	4.05

0.5625 - 9/16 in.

-563 IN. PLATE (AREA= 7.20 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	THICK	WEB	WIDTH	THICK	FLANGE	THICK	AREA
9X 6X .375/.625T	13.69	65.8	40.8	256.7	4.2	3.9	6.3	7.13	9.63	.375	6.00	.625			3.82
10X 5X .438/.563T	13.80	71.1	38.9	279.9	4.4	3.9	7.2	7.19	10.56	.438	5.00	.563			4.87
10X 5X .438/.625T	14.40	72.4	41.6	295.5	4.5	4.1	7.1	7.50	10.63	.438	5.00	.625			4.90
8X 6X .438/.688T	14.65	59.5	39.2	218.6	3.8	3.7	5.6	7.63	8.69	.438	6.00	.688			4.05
9X 5X .438/.750T	14.76	66.7	41.6	264.3	4.2	4.0	6.4	7.69	9.75	.438	5.00	.750			4.52
10X 6X .438/.563T	14.88	72.9	44.1	305.6	4.5	4.2	6.9	7.75	10.56	.438	6.00	.563			4.87
10X 5X .438/.688T	15.00	73.5	44.3	311.2	4.5	4.2	7.0	7.81	10.69	.438	5.00	.688			4.93
10X 6X .438/.625T	15.61	74.1	47.3	323.3	4.6	4.4	6.8	8.13	10.63	.438	6.00	.625			4.90
9X 6X .438/.750T	16.20	68.3	47.8	289.8	4.3	4.2	6.1	8.44	9.75	.438	6.00	.750			4.52
10X 6X .438/.688T	16.32	75.3	50.6	340.3	4.6	4.5	6.7	8.50	10.69	.438	6.00	.688			4.93
9X 7X .438/.688T	16.80	68.6	50.4	297.8	4.3	4.3	5.9	8.75	9.69	.438	7.00	.688			4.49
12X 5X .500/.563T	16.92	87.4	50.7	421.1	5.1	4.8	8.3	8.81	12.56	.500	5.00	.563			6.56
10X 6X .438/.750T	17.05	76.4	54.0	357.7	4.7	4.7	6.6	8.88	10.75	.438	6.00	.750			4.95
12X 5X .500/.625T	17.53	88.9	53.9	442.7	5.2	5.0	8.2	9.13	12.63	.500	5.00	.625			6.60
10X 7X .438/.688T	17.64	76.7	56.9	367.5	4.7	4.8	6.5	9.19	10.69	.438	7.00	.688			4.93
12X 6X .500/.563T	18.01	89.7	56.8	456.5	5.2	5.1	8.0	9.38	12.56	.500	6.00	.563			6.56
12X 5X .500/.688T	18.12	90.3	57.1	463.6	5.3	5.1	8.1	9.44	12.69	.500	5.00	.688			6.63
10X 7X .438/.750T	18.49	77.7	60.6	385.3	4.8	5.0	6.4	9.63	10.75	.438	7.00	.750			4.95
12X 6X .500/.625T	18.72	91.2	60.6	480.5	5.3	5.3	7.9	9.75	12.63	.500	6.00	.625			6.60
9X 8X .438/.750T	19.08	70.5	59.9	334.1	4.4	4.7	5.6	9.94	9.75	.438	6.00	.750			4.52
12X 6X .500/.688T	19.45	92.5	64.4	503.2	5.4	5.4	7.8	10.13	12.69	.500	6.00	.688			6.63
12X 5X .500/.875T	19.93	94.0	66.4	523.1	5.4	5.6	7.9	10.38	12.88	.500	5.00	.875			6.72
12X 6X .500/.750T	20.16	93.9	68.2	525.9	5.4	5.6	7.7	10.50	12.75	.500	6.00	.750			6.66
12X 7X .500/.688T	20.76	94.4	71.7	540.2	5.5	5.7	7.5	10.81	12.69	.500	7.00	.688			6.63
12X 7X .500/.750T	21.60	95.7	76.3	565.2	5.5	5.9	7.4	11.25	12.75	.500	7.00	.750			6.66
14X 6X .563/.625T	22.33	109.6	75.8	680.9	6.0	6.2	9.8	11.63	14.63	.563	6.00	.625			8.55
12X 8X .500/.750T	23.04	97.3	84.2	600.8	5.6	6.2	7.1	12.00	12.75	.500	8.00	.750			6.66
14X 6X .563/.688T	23.04	111.3	80.1	710.2	6.1	6.4	8.9	12.00	14.69	.563	6.00	.688			8.59
12X 7X .500/.875T	23.29	98.0	84.9	611.4	5.6	6.2	7.2	12.13	12.88	.500	7.00	.875			6.72
14X 6X .563/.750T	23.77	112.8	84.4	739.6	6.1	6.6	8.8	12.38	14.75	.563	6.00	.750			8.62
14X 7X .563/.688T	24.36	113.6	88.6	759.2	6.2	6.7	8.6	12.59	14.69	.563	7.00	.688			8.59
12X 8X .500/.875T	24.96	99.5	94.1	650.1	5.7	6.5	6.9	13.00	12.88	.500	8.00	.875			6.72
14X 7X .563/.750T	25.21	115.2	93.6	790.5	6.2	6.9	8.4	13.13	14.75	.563	7.00	.750			8.62
12X 7X .563/1.000T	26.48	101.4	94.8	664.8	5.6	6.6	7.0	13.75	13.00	.563	7.00	1.000			7.64
14X 8X .563/1.000T	26.65	117.2	102.6	837.8	6.3	7.2	8.2	13.88	14.75	.563	8.00	.750			8.62
14X 7X .563/.875T	26.88	118.0	103.4	850.9	6.3	7.2	8.2	14.00	14.88	.563	7.00	.875			8.69
12X 8X .563/1.000T	28.32	103.0	105.1	705.6	5.7	6.9	6.7	14.75	13.00	.563	6.00	1.000			7.64
14X 8X .563/.875T	28.57	120.0	113.9	902.4	6.4	7.5	7.9	14.88	14.88	.563	8.00	.875			8.69
14X 9X .563/.875T	30.24	121.6	124.3	949.5	6.4	7.8	7.6	15.75	14.88	.563	9.00	.875			8.69
14X 8X .563/1.000T	30.49	122.5	125.2	963.3	6.4	7.9	7.7	15.88	15.00	.563	8.00	1.000			8.76
14X 7X .625/1.125T	31.93	124.8	124.5	978.2	6.4	7.8	7.9	16.63	15.13	.625	7.00	1.125			9.81
12X 10X .563/1.000T	32.16	105.4	125.2	776.1	5.7	7.4	6.2	16.75	13.00	.563	10.00	1.000			7.64
14X 9X .563/1.000T	32.41	124.1	136.9	1013.0	6.5	8.2	7.4	16.88	15.00	.563	9.00	1.000			8.76
12X 9X .625/1.125T	33.85	107.8	126.6	797.2	5.7	7.4	6.3	17.63	13.13	.625	9.00	1.125			8.56
14X 8X .625/1.125T	34.08	126.8	137.4	1035.0	6.4	8.2	7.5	17.75	15.13	.625	8.00	1.125			9.81

0.5625 - 9/16 in.



0.563 IN. PLATE (AREA= 7.28 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			R	YP	VF	AREA	DEPTH	DIMENSIONS		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	WEB THICK	WIDTH						THICK		
16X 7X .688/1.000T	34.56	145.4	137.4	1240.8	7.0	8.5	9.0	18.00	17.00	.688	7.00	1.000	12.08
12X10X .625/1.125T	36.00	109.0	137.7	832.9	5.7	7.6	6.0	18.75	13.13	.625	10.00	1.125	8.56
16X 8X .688/1.000T	36.48	148.0	150.5	1310.5	7.1	8.9	8.7	19.00	17.00	.688	8.00	1.000	12.08
16X 7X .688/1.250T	37.92	150.9	158.5	1377.2	7.1	9.1	8.7	19.75	17.25	.688	7.00	1.250	12.26
16X 9X .688/1.000T	38.40	150.2	163.8	1376.0	7.1	9.2	8.4	20.00	17.00	.688	9.00	1.000	12.08
18X 8X .750/.875T	39.36	169.9	162.6	1615.0	7.6	9.5	9.9	20.50	18.88	.750	8.00	.875	14.58
14X 9X .688/1.250T	40.09	133.0	163.9	1160.7	6.4	8.7	7.1	20.88	15.25	.688	9.00	1.250	10.88
16X10X .688/1.000T	40.32	152.1	176.8	1436.0	7.1	9.4	8.1	21.00	17.00	.688	10.00	1.000	12.08
16X 9X .688/1.125T	40.57	153.0	177.1	1452.3	7.2	9.5	8.2	21.13	17.13	.688	9.00	1.125	12.17
18X 9X .750/.875T	41.05	172.7	175.5	1692.4	7.7	9.8	9.6	21.38	18.88	.750	9.00	.875	14.58
18X 8X .750/1.000T	41.28	173.7	176.2	1711.1	7.7	9.9	9.7	21.50	19.00	.750	8.00	1.000	14.67
16X10X .688/1.125T	42.72	154.9	191.7	1515.9	7.2	9.8	7.9	22.25	17.13	.688	10.00	1.125	12.17
16X11X .688/1.125T	44.89	156.6	206.0	1574.0	7.2	10.1	7.6	23.38	17.13	.688	11.00	1.125	12.17
18X 9X .750/1.125T	45.37	179.9	206.0	1891.0	7.8	10.5	9.2	23.63	19.13	.750	9.00	1.125	14.77
18X11X .750/1.000T	47.04	181.1	220.0	1942.9	7.8	10.7	8.8	24.50	19.00	.750	11.00	1.000	14.67
18X 9X .750/1.250T	47.52	183.1	221.1	1984.2	7.9	10.8	9.0	24.75	19.25	.750	9.00	1.250	14.86
18X11X .750/1.125T	49.63	184.5	237.9	2046.2	7.9	11.1	8.6	25.88	19.13	.750	11.00	1.125	14.77
18X10X .750/1.250T	49.92	185.5	238.7	2067.9	7.9	11.2	8.7	26.00	19.25	.750	10.00	1.250	14.86
18X12X .750/1.125T	51.84	186.4	254.0	2116.8	7.9	11.4	8.3	27.00	19.13	.750	12.00	1.125	14.77
18X11X .750/1.250T	52.32	187.6	256.4	2146.1	7.9	11.4	8.4	27.25	19.25	.750	11.00	1.250	14.86
21X 9X .875/1.125T	54.72	227.5	255.3	2730.0	8.7	12.0	10.7	28.50	22.13	.875	9.00	1.125	19.86
18X 9X .875/1.500T	56.16	196.7	254.5	2225.8	7.8	11.3	8.7	29.25	19.50	.875	9.00	1.500	17.55
21X10X .875/1.125T	56.89	230.9	273.7	2841.8	8.8	12.3	10.4	29.63	22.13	.875	10.00	1.125	19.86
21X 9X .875/1.375T	59.04	235.6	288.9	2977.2	8.8	12.6	10.3	30.75	22.38	.875	9.00	1.375	20.07
21X11X .875/1.125T	59.04	233.9	291.9	2947.0	8.8	12.6	10.1	30.75	22.13	.875	11.00	1.125	19.86
21X12X .875/1.125T	61.21	236.7	310.5	3047.5	8.8	12.9	9.8	31.88	22.13	.875	12.00	1.125	19.86
21X 9X .875/1.500T	61.21	239.2	305.5	3094.0	8.9	12.9	10.1	31.88	22.50	.875	9.00	1.500	20.18
21X10X .875/1.375T	61.69	238.9	311.1	3100.6	8.9	13.0	10.0	32.13	22.38	.875	10.00	1.375	20.07
21X10X .875/1.500T	64.09	242.6	329.7	3222.8	8.9	13.3	9.8	33.38	22.50	.875	10.00	1.500	20.18
21X11X .875/1.375T	64.32	241.9	332.9	3214.6	8.9	13.3	9.7	33.50	22.38	.875	11.00	1.375	20.07
21X11X .875/1.500T	66.97	245.5	353.1	3389.9	8.9	13.6	9.5	34.88	22.50	.875	11.00	1.500	20.18
21X10X1.000/1.125T	67.68	287.5	332.8	3963.1	9.7	13.8	11.9	35.25	25.13	1.000	10.00	1.125	25.69
21X13X .875/1.375T	69.60	247.0	376.7	3422.8	8.9	13.9	9.1	36.25	22.38	.875	13.00	1.375	20.07
21X11X1.000/1.125T	69.85	291.6	353.2	4103.4	9.7	14.1	11.6	36.38	25.13	1.000	11.00	1.125	25.69
21X12X .875/1.500T	69.85	248.2	376.9	3451.1	8.9	13.9	9.2	36.38	22.50	.875	12.00	1.500	20.18
21X12X1.000/1.125T	72.00	295.3	373.7	4237.6	9.7	14.4	11.3	37.50	25.13	1.000	12.00	1.125	25.69
21X14X .875/1.375T	72.25	249.2	398.0	3515.6	8.8	14.1	8.8	37.63	22.38	.875	14.00	1.375	20.07
21X10X1.000/1.375T	72.48	297.9	374.6	4304.3	9.8	14.5	11.5	37.75	25.38	1.000	10.00	1.375	25.94
21X13X .875/1.500T	72.73	250.5	400.1	3552.8	8.9	14.2	8.9	37.88	22.50	.875	13.00	1.500	20.18
21X10X1.000/1.500T	74.88	302.6	399.2	4466.0	9.8	14.8	11.3	39.00	25.50	1.000	10.00	1.500	26.06
21X11X1.000/1.375T	75.13	302.0	399.1	4459.5	9.8	14.8	11.2	39.13	25.38	1.000	11.00	1.375	25.94
21X14X .875/1.500T	75.61	252.6	423.5	3649.4	8.8	14.4	8.6	39.38	22.50	.875	14.00	1.500	20.18
21X11X1.000/1.500T	77.76	306.7	421.8	4627.8	9.8	15.1	11.0	40.50	25.50	1.000	11.00	1.500	26.06
21X15X .875/1.500T	78.49	254.6	446.5	3739.1	8.8	14.7	8.4	40.88	22.50	.875	15.00	1.500	20.18
24X10X1.000/1.750T	79.68	311.2	435.7	4776.5	9.3	15.4	11.0	41.50	25.75	1.000	10.00	1.750	26.31

0.5625 - 9/16 in.

563 IN. PLATE (AREA= 7.28 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS										***** BEAM DIMENSIONS *****										SHEAR	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	FLANGE THICK	AREA								
24X13X1.000/1.375T	80.41	309.0	448.6	4746.8	9.8	15.4	10.6	41.88	25.38	1.000	13.00	1.375	25.94	25.94	25.94								
24X12X1.000/1.500T	80.64	310.3	448.4	4779.9	9.8	15.4	10.7	42.00	25.50	1.000	12.00	1.500	26.06	26.06	26.06								
24X11X1.000/1.500T	81.37	256.3	469.6	3824.1	8.8	14.9	8.1	42.38	22.50	.875	16.00	1.500	20.18	20.18	20.18								
24X11X1.000/1.750T	83.04	315.2	466.2	4948.6	9.9	15.7	10.6	43.25	25.75	1.000	11.00	1.750	26.31	26.31	26.31								
24X14X1.000/1.375T	83.04	312.1	473.0	4877.7	9.8	15.6	10.3	43.25	25.38	1.000	14.00	1.375	25.94	25.94	25.94								
24X13X1.000/1.500T	83.52	313.6	475.4	4925.0	9.8	15.7	10.4	44.50	25.50	1.000	13.00	1.500	26.06	26.06	26.06								
24X15X1.000/1.375T	85.63	314.9	496.9	5000.2	9.8	15.9	10.1	44.63	25.38	1.000	15.00	1.375	25.94	25.94	25.94								
24X12X1.000/1.500T	86.40	318.8	496.8	5109.9	9.9	16.0	10.3	45.00	25.75	1.000	12.00	1.750	26.31	26.31	26.31								
24X14X1.000/1.500T	86.40	316.7	501.5	5058.9	9.8	16.0	10.1	45.00	25.50	1.000	14.00	1.500	26.06	26.06	26.06								
24X15X1.000/1.500T	89.28	319.5	527.8	5186.5	9.8	16.2	9.8	46.50	25.50	1.000	15.00	1.500	26.06	26.06	26.06								
24X13X1.000/1.750T	89.76	322.1	527.2	5261.1	9.9	16.3	10.0	46.75	25.75	1.000	13.00	1.750	26.31	26.31	26.31								
27X12X1.125/1.375T	90.01	376.3	501.1	6219.9	10.7	16.5	12.4	46.88	28.38	1.125	12.00	1.375	32.56	32.56	32.56								
27X13X1.125/1.375T	92.64	380.7	528.7	6486.0	10.7	16.8	12.1	46.25	28.38	1.125	13.00	1.375	32.56	32.56	32.56								
27X12X1.125/1.500T	92.89	382.2	528.7	6447.1	10.8	16.9	12.2	46.38	28.50	1.125	12.00	1.500	32.70	32.70	32.70								
24X14X1.000/1.750T	93.12	325.1	556.7	5400.2	9.8	16.6	9.7	48.50	25.75	1.000	14.00	1.750	26.31	26.31	26.31								
27X14X1.125/1.375T	95.29	384.8	555.4	6579.7	10.8	17.1	11.8	49.63	28.38	1.125	14.00	1.375	32.56	32.56	32.56								
27X13X1.125/1.500T	95.77	386.7	558.2	6638.9	10.8	17.2	11.9	49.88	28.50	1.125	13.00	1.500	32.70	32.70	32.70								
24X15X1.000/1.750T	96.48	327.7	587.2	5534.7	9.8	16.9	9.4	50.25	25.75	1.000	15.00	1.750	26.31	26.31	26.31								
27X12X1.125/1.750T	98.65	393.1	582.6	6880.6	10.8	17.5	11.8	51.38	28.75	1.125	12.00	1.750	32.98	32.98	32.98								
27X15X1.125/1.500T	101.53	394.6	616.6	6982.7	10.8	17.7	11.3	52.88	28.50	1.125	15.00	1.500	32.70	32.70	32.70								
27X13X1.125/1.750T	102.01	397.6	616.4	7084.4	10.8	17.8	11.5	53.13	28.75	1.125	13.00	1.750	32.98	32.98	32.98								
27X12X1.125/2.000T	104.41	403.0	634.6	7286.4	10.9	18.1	11.5	54.38	29.00	1.125	12.00	2.000	33.26	33.26	33.26								
27X14X1.125/1.750T	105.37	401.6	649.9	7276.2	10.8	18.1	11.2	54.88	28.75	1.125	14.00	1.750	32.98	32.98	32.98								
27X13X1.125/2.000T	108.25	407.4	672.7	7500.6	10.9	18.4	12.9	56.38	29.00	1.125	13.00	2.000	33.26	33.26	33.26								
30X15X1.250/1.500T	115.20	480.7	715.7	9219.8	11.7	19.2	12.9	60.00	31.50	1.250	15.00	1.500	40.08	40.08	40.08								
30X16X1.250/1.500T	118.08	485.3	747.9	9436.2	11.7	19.4	12.6	61.50	31.50	1.250	16.00	1.500	40.88	40.88	40.88								
30X14X1.250/1.750T	119.04	489.5	751.6	9578.4	11.8	19.6	12.7	62.00	31.75	1.250	14.00	1.750	40.39	40.39	40.39								
30X17X1.250/1.750T	129.12	503.2	862.2	10286.9	11.7	20.4	11.9	67.25	31.75	1.250	17.00	1.750	40.39	40.39	40.39								
30X15X1.250/2.000T	129.60	506.6	860.3	10382.9	11.8	20.5	12.1	67.50	32.00	1.250	15.00	2.000	40.70	40.70	40.70								
30X16X1.250/2.000T	133.44	511.1	902.0	10623.4	11.8	20.8	11.8	69.50	32.00	1.250	16.00	2.000	40.70	40.70	40.70								
33X17X1.375/1.750T	144.25	607.0	985.5	13284.7	12.7	21.9	13.5	75.13	34.75	1.375	17.00	1.750	48.55	48.55	48.55								
33X15X1.375/2.000T	144.73	610.8	984.0	13402.7	12.7	22.2	13.3	75.38	35.00	1.375	15.00	2.000	48.90	48.90	48.90								
33X16X1.375/2.000T	148.57	616.7	1029.2	13713.9	12.7	22.2	13.3	77.38	35.00	1.375	16.00	2.000	48.90	48.90	48.90								
33X17X1.375/2.000T	152.41	622.1	1074.6	14011.9	12.7	22.5	13.8	79.38	35.00	1.375	17.00	2.000	48.90	48.90	48.90								
36X16X1.500/1.750T	157.44	717.4	1077.1	16496.7	13.6	23.0	15.3	82.00	37.75	1.500	16.00	1.750	57.47	57.47	57.47								
36X17X1.500/1.750T	160.80	724.3	1120.0	16882.1	13.6	23.3	15.0	83.75	37.75	1.500	17.00	1.750	57.47	57.47	57.47								
36X15X1.500/2.000T	161.28	728.5	1118.7	17013.9	13.7	23.4	15.2	84.00	38.00	1.500	15.00	2.000	57.84	57.84	57.84								
36X16X1.500/2.000T	165.12	735.9	1167.7	17408.5	13.7	23.7	14.9	86.00	38.00	1.500	16.00	2.000	57.84	57.84	57.84								

0.5625 - 9/16 in.



.625 IN. PLATE (AREA= 8.98 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	FLANGE THICK	
3X 2X .125/.168T	1.44	11.3	1.8	5.8	.8	.5	3.3	.75	3.19	.125	2.00	.188	.48
3X 2X .168/.250T	2.04	13.1	2.3	7.7	.9	.6	3.3	1.06	3.25	.168	2.00	.250	.73
3X 2X .188/.313T	2.28	14.5	2.7	9.1	.9	.6	3.3	1.19	3.31	.188	2.00	.313	.74
4X 2X .168/.250T	2.40	19.6	3.3	13.7	1.2	.7	4.2	1.25	4.25	.168	2.00	.250	.92
4X 2X .188/.313T	2.65	21.1	3.8	15.9	1.2	.8	4.2	1.38	4.31	.188	2.00	.313	.93
3X 3X .168/.313T	2.88	16.9	3.8	12.2	1.1	.7	3.2	1.50	3.31	.168	3.00	.313	.74
4X 3X .188/.313T	3.24	23.9	5.1	20.7	1.4	.9	4.1	1.69	4.31	.188	3.00	.313	.93
3X 3X .250/.375T	3.61	18.2	4.5	14.6	1.2	.8	3.2	1.88	3.38	.250	3.00	.375	1.00
3X 3X .250/.438T	3.96	19.2	5.1	16.4	1.2	.9	3.2	2.06	3.44	.250	3.00	.438	1.02
4X 3X .250/.375T	4.09	25.5	6.2	25.0	1.5	1.0	4.0	2.13	4.38	.250	3.00	.375	1.25
5X 3X .250/.313T	4.20	31.5	7.1	34.2	1.7	1.1	4.8	2.19	5.31	.250	3.00	.313	1.48
4X 3X .250/.438T	4.44	26.7	6.9	27.8	1.6	1.0	4.0	2.31	4.44	.250	3.00	.438	1.27
5X 3X .250/.375T	4.57	33.0	8.0	38.6	1.8	1.2	4.8	2.38	5.38	.250	3.00	.375	1.50
6X 3X .250/.313T	4.68	39.0	8.8	49.8	2.1	1.3	5.7	2.44	6.31	.250	3.00	.313	1.73
5X 3X .250/.438T	4.92	34.5	8.9	42.9	1.9	1.2	4.8	2.56	5.44	.250	3.00	.438	1.52
6X 3X .250/.375T	5.05	40.7	9.9	55.9	2.2	1.4	5.6	2.63	6.38	.250	3.00	.375	1.75
6X 3X .250/.438T	5.40	42.3	11.0	61.7	2.3	1.5	5.6	2.81	6.44	.250	3.00	.438	1.77
6X 4X .250/.375T	5.76	43.2	12.2	66.4	2.4	1.5	5.5	3.00	6.38	.250	4.00	.375	1.75
6X 4X .250/.438T	6.24	44.7	13.6	73.9	2.5	1.7	5.4	3.25	6.44	.250	4.00	.438	1.77
5X 4X .313/.500T	6.84	37.8	12.8	58.5	2.2	1.5	4.6	3.56	5.50	.313	4.00	.500	1.92
7X 4X .313/.375T	7.08	51.2	15.5	95.1	2.7	1.9	6.1	3.69	7.38	.313	4.00	.375	2.51
7X 4X .313/.438T	7.45	46.1	15.8	83.7	2.6	1.8	5.3	3.94	6.50	.313	4.00	.438	2.52
6X 4X .313/.563T	7.93	47.2	17.2	104.4	2.8	2.0	6.1	4.13	6.56	.313	4.00	.563	2.25
7X 4X .313/.500T	8.04	54.3	18.9	113.7	2.9	2.1	6.0	4.19	7.50	.313	4.00	.500	2.54
6X 5X .313/.500T	8.41	47.9	18.8	96.1	2.7	2.0	5.1	4.38	6.50	.313	5.00	.500	2.23
7X 4X .313/.563T	8.52	55.6	20.6	122.8	3.0	2.2	6.0	4.44	7.56	.313	4.00	.563	2.56
7X 5X .313/.500T	9.00	56.3	22.3	129.8	3.1	2.3	5.8	4.69	7.50	.313	5.00	.500	2.54
8X 4X .375/.438T	9.12	61.0	21.2	142.8	3.2	2.4	6.7	4.75	8.44	.375	4.00	.438	3.40
7X 5X .375/.563T	9.60	57.6	23.1	154.1	3.3	2.5	6.7	5.00	8.50	.375	5.00	.563	2.56
8X 4X .375/.500T	9.85	62.6	24.4	163.5	3.6	2.6	7.4	5.13	9.44	.375	4.00	.500	3.42
8X 4X .375/.563T	10.08	64.0	25.0	184.9	3.6	2.6	6.6	5.25	8.56	.375	4.00	.563	3.77
9X 4X .375/.500T	10.33	71.0	26.9	197.3	3.7	2.8	7.3	5.38	9.50	.375	4.00	.500	3.44
8X 4X .375/.625T	10.56	65.3	26.8	175.9	3.5	2.7	6.6	5.50	8.63	.375	4.00	.625	3.80
7X 6X .313/.563T	10.68	59.0	28.2	156.2	3.3	2.6	5.5	5.56	7.56	.375	6.00	.563	2.56
9X 4X .375/.563T	10.81	72.5	28.9	210.4	3.8	2.9	7.3	5.63	9.56	.375	4.00	.563	3.82
8X 5X .375/.563T	11.16	66.2	29.3	186.7	3.6	2.8	6.4	5.81	8.56	.375	5.00	.563	3.44
11.29	73.4	31.1	31.7	199.4	3.6	3.0	6.3	6.13	8.63	.375	5.00	.500	3.80
8X 5X .375/.625T	11.77	67.5	31.7	193.4	3.6	3.0	6.3	6.13	8.63	.375	5.00	.625	3.47
9X 5X .375/.500T	11.88	74.9	33.7	236.9	4.0	3.2	7.0	6.19	9.56	.375	5.00	.563	3.82
8X 6X .375/.563T	12.25	68.0	33.7	207.1	3.7	3.0	6.1	6.38	8.56	.375	6.00	.563	3.44
9X 5X .375/.625T	12.48	76.3	36.3	252.1	4.0	3.3	7.0	6.50	9.63	.375	5.00	.625	3.85
9X 6X .375/.563T	12.96	76.9	38.6	261.6	4.1	3.4	6.8	6.75	9.56	.375	6.00	.563	3.82
10X 5X .438/.500T	13.21	82.4	37.0	283.9	4.2	3.4	7.7	6.88	10.50	.438	5.00	.500	4.87

0.6250 - 5/8 in.

.625 IN. PLATE (AREA= 8.98 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****											SHEAR AREA	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	FLANGE THICK					
9X 6X	.375/.625T	13.69	78.2	41.6	278.6	4.2	3.6	6.7	7.13	9.63	.375	6.00	.625	3.85				
10X 5X	.438/.563T	13.90	84.1	39.8	302.3	4.3	3.6	7.6	7.19	10.56	.438	5.00	.563	4.90				
10X 5X	.438/.625T	14.40	85.6	42.5	319.6	4.4	3.7	7.5	7.50	10.63	.438	5.00	.625	4.93				
8X 6X	.438/.688T	14.65	70.6	40.1	238.0	3.8	3.4	5.9	7.63	8.69	.438	6.00	.688	4.54				
9X 5X	.438/.750T	14.76	79.1	42.6	287.0	4.1	3.6	6.7	7.69	9.75	.438	5.00	.750	4.54				
10X 6X	.438/.563T	14.88	86.3	45.1	331.1	4.4	3.8	7.3	7.75	10.56	.438	6.00	.563	4.90				
10X 5X	.438/.688T	15.00	87.0	45.3	337.2	4.5	3.9	7.4	7.81	10.69	.438	5.00	.688	4.96				
10X 6X	.438/.625T	15.61	87.8	48.4	351.1	4.5	4.0	7.3	8.13	10.63	.438	6.00	.625	4.93				
9X 6X	.438/.750T	16.20	81.0	48.8	316.1	4.3	3.9	6.5	8.44	9.75	.438	6.00	.750	4.54				
10X 6X	.438/.688T	16.32	89.1	51.7	370.3	4.6	4.2	7.2	8.50	10.69	.438	6.00	.688	4.96				
9X 7X	.438/.688T	16.80	81.4	51.5	325.4	4.3	4.0	6.3	8.75	9.69	.438	7.00	.688	4.52				
12X 5X	.500/.563T	16.92	102.8	52.0	455.3	5.1	4.4	8.8	8.81	12.56	.500	5.00	.563	6.59				
10X 6X	.438/.750T	17.05	90.5	55.2	390.0	4.7	4.3	7.1	8.88	10.75	.438	6.00	.750	4.98				
12X 5X	.500/.625T	17.53	104.6	55.3	479.3	5.1	4.6	8.7	9.13	12.63	.500	5.00	.625	6.63				
12X 7X	.438/.688T	17.64	90.9	58.2	491.4	4.7	4.4	6.9	9.19	10.69	.438	7.00	.688	4.96				
12X 6X	.500/.563T	18.01	105.5	58.3	494.8	5.2	4.7	8.5	9.38	12.56	.500	6.00	.563	6.59				
12X 5X	.500/.688T	18.12	106.3	58.6	502.6	5.2	4.7	8.6	9.44	12.69	.500	5.00	.688	6.66				
10X 7X	.438/.750T	18.49	92.1	62.0	421.7	4.8	4.6	6.8	9.63	10.75	.438	7.00	.750	4.98				
12X 6X	.500/.625T	19.72	107.3	62.2	521.8	5.3	4.9	8.4	9.75	12.63	.500	6.00	.625	6.63				
9X 8X	.438/.750T	19.08	83.8	61.3	367.3	4.4	4.4	6.0	9.94	9.75	.438	8.00	.750	4.54				
12X 6X	.500/.688T	19.45	108.9	66.0	547.3	5.4	5.0	8.3	10.13	12.69	.500	6.00	.688	6.66				
12X 5X	.500/.875T	19.93	110.6	68.1	569.4	5.4	5.1	8.4	10.38	12.88	.500	5.00	.875	6.75				
12X 6X	.500/.750T	20.16	110.5	70.0	572.9	5.4	5.2	8.2	10.50	12.75	.500	6.00	.750	6.69				
12X 7X	.500/.688T	20.76	111.2	73.5	589.2	5.5	5.3	8.0	10.81	12.69	.500	7.00	.688	6.66				
12X 7X	.500/.750T	21.60	112.7	78.2	617.6	5.5	5.5	7.9	11.25	12.75	.500	7.00	.750	6.69				
14X 6X	.563/.625T	22.33	128.1	77.9	739.1	6.0	5.8	9.5	11.63	14.63	.563	6.00	.625	8.59				
12X 8X	.500/.750T	23.04	114.6	86.3	658.4	5.6	5.7	7.6	12.00	12.75	.500	8.00	.750	6.69				
14X 6X	.563/.688T	23.04	130.0	82.3	771.8	6.1	5.9	9.4	12.00	14.69	.563	6.00	.688	8.62				
12X 7X	.500/.875T	23.29	115.4	87.1	670.3	5.6	5.8	7.7	12.13	12.88	.500	7.00	.875	6.75				
14X 6X	.563/.750T	23.77	131.9	86.0	804.7	6.1	6.1	9.3	12.38	14.75	.563	6.00	.750	8.66				
14X 7X	.563/.688T	24.36	132.8	91.0	827.1	6.2	6.2	9.1	12.69	14.69	.563	7.00	.688	8.62				
12X 8X	.500/.875T	24.96	117.3	96.5	715.0	5.7	6.1	7.4	13.00	12.88	.500	8.00	.875	6.75				
14X 7X	.563/.750T	25.21	134.6	96.1	862.3	6.2	6.4	9.0	13.13	14.75	.563	7.00	.750	8.66				
12X 7X	.563/.1.000T	26.40	119.1	97.5	730.2	5.7	6.1	7.5	13.75	13.00	.563	7.00	1.000	7.67				
14X 8X	.563/.750T	26.65	137.0	105.4	916.0	6.3	6.7	8.7	13.88	14.75	.563	8.00	.750	8.66				
14X 7X	.563/.875T	26.88	137.9	106.2	930.4	6.4	6.7	8.8	14.00	14.88	.563	7.00	.875	8.73				
12X 8X	.563/.1.000T	28.32	120.9	108.0	777.5	5.7	6.4	7.2	14.75	13.00	.563	8.00	1.000	7.67				
14X 8X	.563/.875T	28.57	140.2	117.1	989.3	6.4	7.1	8.5	14.88	14.88	.563	8.00	.875	8.73				
14X 9X	.563/.875T	30.24	142.2	127.8	1043.5	6.5	7.3	8.2	15.75	14.88	.563	9.00	.875	8.73				
14X 8X	.563/.1.000T	30.49	143.1	128.7	1050.8	6.5	7.4	8.2	15.88	15.00	.563	8.00	1.000	8.80				
14X 7X	.625/.1.125T	31.93	145.3	128.2	1073.2	6.5	7.4	8.4	16.63	15.13	.625	7.00	1.125	9.85				
12X 10X	.563/.1.000T	32.16	123.8	128.8	859.9	5.8	6.9	6.7	16.75	13.00	.563	10.00	1.000	7.67				
14X 9X	.563/.1.000T	32.41	145.1	140.8	1116.3	6.6	7.7	7.9	16.88	15.00	.563	9.00	1.000	8.80				
12X 9X	.625/.1.125T	33.85	126.1	130.4	881.9	5.8	7.0	6.8	17.63	13.13	.625	9.00	1.125	8.60				
14X 8X	.625/.1.125T	34.08	147.7	141.5	1138.5	6.5	7.7	8.0	17.75	15.13	.625	8.00	1.125	9.85				

0.6250 - 5/8 in.



•625 IN. PLATE (AREA= 8.98 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	VP	VF	AREA	DEPTH	WEB THICK	FLANGE		SHEAR AREA
		ZPL	ZFL							WIDTH	THICK	
16X 7X .688/1.000T	34.56	167.9	141.7	7.1	8.1	9.6	16.00	17.00	.688	7.00	1.000	12.13
12X10X .625/1.125T	36.00	127.5	141.9	5.8	7.2	6.5	18.75	13.13	.625	10.00	1.125	8.60
16X 8X .688/1.000T	36.48	170.9	155.1	7.2	8.4	9.2	19.00	17.00	.688	8.00	1.000	12.13
16X 7X .688/1.250T	37.92	174.3	163.4	7.2	8.7	9.2	19.75	17.25	.688	7.00	1.250	12.30
16X 9X .688/1.000T	38.40	173.4	168.7	7.2	8.7	8.9	20.00	17.00	.688	9.00	1.000	12.13
18X 8X .750/.875T	39.36	194.6	167.7	7.7	9.0	10.5	20.50	18.88	.750	8.00	.875	14.63
14X 9X .688/1.250T	40.09	154.3	169.0	6.5	8.3	7.6	20.88	15.25	.688	9.00	1.250	10.92
16X10X .688/1.000T	40.32	175.7	182.1	7.2	9.0	8.7	21.00	17.00	.688	10.00	1.000	12.13
16X 9X .688/1.125T	40.57	176.7	182.5	7.3	9.0	8.7	21.13	17.13	.688	9.00	1.125	12.22
18X 9X .750/.875T	41.05	197.8	181.0	7.8	9.3	10.2	21.38	18.88	.750	9.00	.875	14.63
18X 8X .750/1.000T	41.28	198.9	181.8	7.8	9.4	10.3	21.50	19.00	.750	8.00	1.000	14.72
16X10X .688/1.125T	42.72	178.9	197.6	7.3	9.3	8.4	22.25	17.13	.688	10.00	1.125	12.22
16X11X .688/1.125T	44.89	180.8	212.3	7.3	9.6	8.2	23.38	17.13	.688	11.00	1.125	12.22
18X 9X .750/1.000T	45.37	206.0	212.4	8.0	10.0	9.7	23.63	19.13	.750	9.00	1.125	14.82
18X11X .750/1.000T	47.04	207.3	226.7	8.0	10.3	9.4	24.50	19.00	.750	11.00	1.000	14.72
18X 9X .750/1.250T	47.52	209.5	228.1	8.0	10.4	9.5	24.75	19.25	.750	9.00	1.250	14.91
18X10X .750/1.250T	49.92	212.3	246.3	8.0	10.7	9.2	26.00	19.25	.750	10.00	1.250	14.91
18X12X .750/1.125T	51.84	213.3	261.9	8.0	10.9	8.9	27.00	19.13	.750	12.00	1.125	14.82
18X11X .750/1.250T	52.32	214.6	264.5	8.1	11.0	8.9	27.25	19.25	.750	11.00	1.250	14.91
21X 9X .875/1.125T	54.72	256.9	263.5	8.9	11.5	11.2	28.50	22.13	.875	9.00	1.125	19.91
18X 9X .875/1.500T	56.16	223.4	262.9	8.0	10.9	9.2	29.25	19.50	.875	9.00	1.500	17.61
21X10X .875/1.125T	56.89	260.7	282.4	8.9	11.8	10.9	29.63	22.13	.875	10.00	1.125	19.91
21X 9X .875/1.375T	59.04	265.8	298.2	9.0	12.2	10.6	30.75	22.13	.875	9.00	1.375	20.13
21X11X .875/1.125T	59.04	264.1	301.1	9.0	12.1	10.6	30.75	22.13	.875	11.00	1.125	19.91
21X12X .875/1.125T	61.21	267.1	320.2	9.0	12.4	10.3	31.88	22.13	.875	12.00	1.125	19.91
21X 9X .875/1.500T	61.21	269.9	315.4	9.1	12.5	10.7	31.88	22.50	.875	9.00	1.500	20.23
21X10X .875/1.375T	61.69	269.6	321.1	9.1	12.5	10.5	32.13	22.38	.875	10.00	1.375	20.13
21X10X .875/1.500T	64.09	273.6	340.3	9.1	12.8	10.3	33.38	22.50	.875	10.00	1.500	20.23
21X11X .875/1.375T	64.32	272.9	343.5	9.1	12.8	10.2	33.50	22.38	.875	11.00	1.375	20.13
21X11X .875/1.500T	66.97	276.9	364.4	9.1	13.1	10.0	34.88	22.50	.875	11.00	1.500	20.23
24X10X1.000/1.125T	67.68	320.6	343.4	9.8	13.3	12.4	35.25	25.13	1.000	10.00	1.125	25.76
21X13X .875/1.375T	69.60	278.6	388.7	9.1	13.4	9.6	36.25	22.38	.875	13.00	1.375	20.13
24X11X1.000/1.125T	69.85	325.0	364.2	9.9	13.6	12.1	36.38	25.13	1.000	11.00	1.125	25.76
21X12X .875/1.500T	69.85	279.8	359.0	9.1	13.5	9.7	36.38	22.50	.875	12.00	1.500	20.23
24X12X1.000/1.125T	72.00	329.0	385.3	9.9	13.9	11.9	37.50	25.13	1.000	12.00	1.125	25.76
21X14X .875/1.375T	72.25	281.0	410.6	9.1	13.7	9.3	37.63	22.38	.875	14.00	1.375	20.13
24X10X1.000/1.375T	72.48	331.8	386.4	10.0	14.0	12.0	37.75	25.38	1.000	10.00	1.375	26.01
21X13X .875/1.500T	72.73	282.4	412.9	9.1	13.7	9.4	37.68	22.50	.875	13.00	1.500	20.23
24X10X1.000/1.500T	74.88	336.9	407.6	10.0	14.3	11.8	39.00	25.50	1.000	10.00	1.500	26.13
24X11X1.000/1.375T	75.13	336.3	411.6	10.0	14.3	11.7	39.13	25.38	1.000	11.00	1.375	26.01
21X14X .875/1.500T	75.61	284.8	437.1	9.1	14.0	9.1	39.38	22.50	.875	14.00	1.500	20.23
24X11X1.000/1.500T	77.76	341.4	435.0	10.0	14.6	11.5	40.50	25.50	1.000	11.00	1.500	26.13
21X15X .875/1.500T	78.49	286.9	460.8	9.1	14.3	8.9	40.88	22.50	.875	15.00	1.500	20.23
24X10X1.000/1.750T	79.68	346.3	449.5	10.1	14.9	11.5	41.50	25.75	1.000	10.00	1.750	26.38

0.6250 - 5/8 in.

0.625 IN. PLATE (AREA= 8.98 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION		MODULUS	INERTIA	R	YF	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL								WE3	WIDTH	THICK	
24X13X1.000/1.375T	80.41	344.0	462.5	5130.3	10.0	14.9	11.1	41.88	25.38	1.000	13.00	1.375	26.01	
24X12X1.000/1.500T	80.64	345.4	462.4	5165.4	10.1	15.0	11.2	42.00	25.50	1.000	12.00	1.500	26.13	
21X16X.875/1.500T	81.37	288.9	484.7	4185.8	9.0	14.5	8.6	42.38	22.50	.875	16.00	1.500	20.23	
24X11X1.000/1.750T	83.04	350.8	480.9	5349.5	10.1	15.3	11.1	43.25	25.75	1.000	11.00	1.750	26.38	
24X14X1.000/1.375T	83.04	347.4	487.6	5275.1	10.0	15.2	10.8	43.25	25.38	1.000	14.00	1.375	26.01	
24X13X1.000/1.500T	83.52	349.1	490.1	5326.3	10.1	15.3	10.9	43.50	25.50	1.000	13.00	1.500	26.13	
24X15X1.000/1.375T	85.69	350.5	512.1	5410.9	10.0	15.4	10.6	44.63	25.38	1.000	15.00	1.375	26.01	
24X12X1.000/1.750T	86.40	354.7	512.4	5528.4	10.1	15.6	10.8	45.00	25.75	1.000	12.00	1.750	26.38	
24X14X1.000/1.500T	86.40	352.4	517.0	5474.7	10.1	15.5	10.6	45.00	25.50	1.000	14.00	1.500	26.13	
24X15X1.000/1.750T	89.76	358.3	543.8	5696.4	10.1	15.9	10.5	46.75	25.75	1.000	15.00	1.500	26.13	
27X12X1.125/1.375T	90.71	414.3	516.2	6665.7	10.9	16.1	12.9	46.88	28.38	1.125	12.00	1.375	32.63	
27X13X1.125/1.375T	92.64	419.0	544.5	6868.5	11.0	16.4	12.6	48.25	28.38	1.125	13.00	1.375	32.63	
27X12X1.125/1.500T	92.99	420.6	544.5	6911.9	11.0	16.4	12.7	48.38	28.50	1.125	12.00	1.500	32.77	
24X14X1.000/1.750T	93.12	361.5	574.2	5850.9	10.1	16.2	10.2	48.50	25.75	1.000	14.00	1.750	26.38	
27X14X1.125/1.375T	95.29	423.5	571.9	7057.6	11.0	16.7	12.3	49.63	28.38	1.125	14.00	1.375	32.63	
27X13X1.125/1.500T	95.77	425.5	574.8	7120.9	11.0	16.7	12.4	49.88	28.50	1.125	13.00	1.500	32.77	
24X15X1.000/1.750T	96.48	364.4	605.7	6001.0	10.1	16.5	9.9	50.25	25.75	1.000	15.00	1.750	26.38	
27X12X1.125/1.750T	98.65	432.4	600.1	7382.1	11.1	17.1	12.3	51.38	28.75	1.125	12.00	1.750	33.05	
27X15X1.125/1.500T	101.53	434.0	634.8	7507.3	11.0	17.3	11.8	52.88	28.50	1.125	15.00	1.500	32.77	
27X13X1.125/1.750T	102.01	437.2	634.8	7604.8	11.1	17.4	12.0	53.13	28.75	1.125	13.00	1.750	33.05	
27X14X1.125/1.750T	104.81	443.0	653.7	7822.5	11.1	17.7	12.0	54.38	29.00	1.125	12.00	2.000	33.33	
27X13X1.125/2.000T	105.37	441.5	669.3	7814.6	11.1	17.7	11.7	54.88	28.75	1.125	14.00	1.750	33.05	
30X15X1.250/1.500T	115.20	523.4	735.7	9824.9	11.9	18.8	13.4	60.00	31.50	1.250	15.00	1.500	40.16	
30X16X1.250/1.500T	116.08	528.3	768.7	10058.5	11.9	19.0	13.1	61.50	31.50	1.250	16.00	1.500	40.16	
30X14X1.250/1.750T	119.84	532.7	772.7	10208.9	12.0	19.2	13.2	62.00	31.75	1.250	14.00	1.750	40.47	
30X17X1.250/1.750T	123.12	547.3	806.1	10953.9	12.0	20.0	12.4	67.25	31.75	1.250	17.00	1.750	40.47	
30X15X1.250/2.000T	129.60	551.0	884.4	11075.9	12.0	20.1	12.5	67.58	32.00	1.250	15.00	2.000	40.78	
30X16X1.250/2.000T	133.44	555.8	927.2	11336.9	12.0	20.4	12.2	69.50	32.00	1.250	16.00	2.000	40.78	
33X17X1.375/1.750T	144.25	654.5	1011.1	14054.9	12.9	21.5	13.9	75.13	34.75	1.375	12.00	1.750	48.64	
33X15X1.375/2.000T	144.73	658.5	1009.7	14199.4	13.0	21.6	14.1	75.38	35.00	1.375	15.00	2.000	48.98	
33X16X1.375/2.000T	148.57	664.7	1056.0	14532.8	13.0	21.9	13.8	77.38	35.00	1.375	16.00	2.000	48.98	
33X17X1.375/2.000T	152.41	670.4	1102.5	14852.5	13.0	22.2	13.5	79.38	35.00	1.375	17.00	2.000	48.98	
36X16X1.500/1.750T	157.44	767.7	1103.4	17373.6	13.8	22.6	15.7	82.00	37.75	1.500	16.00	1.750	57.56	
36X17X1.500/1.750T	160.80	775.1	1147.1	17750.1	13.8	22.9	15.5	83.75	37.75	1.500	17.00	1.750	57.56	
36X15X1.500/2.000T	161.28	779.4	1146.8	17918.8	13.9	23.0	15.6	84.00	38.00	1.500	15.00	2.000	57.94	
36X16X1.500/2.000T	165.12	787.2	1196.1	18337.4	13.9	23.3	15.3	86.00	38.00	1.500	16.80	2.000	57.94	

0.6250 - 5/8 in.



-.688 IN. PLATE (AREA= 10.87 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM			FLANGE			SHEAR
3X 2X	.125/ .180T	WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
3X 2X	.125/ .180T	1.44	11.9	1.0	6.1	.7	.5	3.4	.75	3.19	.125	2.00	.188	.48
3X 2X	.188/ .250T	2.04	14.0	2.4	8.1	.8	.6	3.4	1.06	3.25	.188	2.00	.250	.74
3X 2X	.188/ .313T	2.28	15.6	2.8	9.5	.9	.6	3.4	1.19	3.31	.188	2.00	.313	.75
4X 2X	.188/ .250T	2.40	21.2	3.3	14.3	1.1	.7	4.3	1.25	4.25	.188	2.00	.250	.93
4X 2X	.188/ .313T	2.65	23.1	3.9	16.6	1.2	.7	4.3	1.38	4.31	.188	2.00	.313	.94
3X 3X	.188/ .313T	2.88	18.4	3.9	12.8	1.0	.7	3.3	1.50	3.31	.188	3.00	.313	.75
4X 3X	.188/ .313T	3.24	26.4	5.2	21.7	1.3	.8	4.2	1.69	4.31	.188	3.00	.313	.94
3X 3X	.250/ .375T	3.61	20.1	4.7	15.4	1.1	.8	3.3	1.88	3.38	.250	3.00	.375	1.02
3X 3X	.250/ .438T	3.96	21.4	5.2	17.3	1.2	.8	3.3	2.06	3.44	.250	3.00	.438	1.03
4X 3X	.250/ .375T	4.09	28.5	6.3	26.2	1.4	.9	4.1	2.13	4.38	.250	3.00	.375	1.27
5X 3X	.250/ .313T	4.20	35.3	7.2	35.0	1.7	1.0	5.0	2.19	5.31	.250	3.00	.313	1.50
4X 3X	.250/ .438T	4.44	30.0	7.0	29.3	1.5	1.0	4.2	2.31	4.44	.250	3.00	.438	1.28
5X 3X	.250/ .375T	4.57	37.3	8.1	40.4	1.7	1.1	5.0	2.38	5.38	.250	3.00	.375	1.52
6X 3X	.250/ .313T	4.68	44.2	8.9	52.1	2.0	1.2	5.8	2.44	6.31	.250	3.00	.313	1.75
5X 3X	.250/ .438T	4.92	39.1	9.0	45.0	1.8	1.2	5.0	2.56	5.44	.250	3.00	.438	1.53
6X 3X	.250/ .375T	5.05	46.3	10.1	58.5	2.1	1.3	5.8	2.63	6.38	.250	3.00	.375	1.77
6X 3X	.250/ .438T	5.40	48.3	11.2	64.6	2.2	1.3	5.8	2.81	6.44	.250	3.00	.438	1.78
6X 4X	.250/ .375T	5.76	49.4	12.3	69.8	2.2	1.4	5.7	3.00	6.38	.250	4.00	.375	1.77
6X 4X	.250/ .438T	6.24	51.4	13.8	77.7	2.3	1.5	5.6	3.25	6.44	.250	4.00	.438	1.78
5X 4X	.313/ .500T	6.84	43.4	13.0	61.9	2.1	1.4	4.8	3.56	5.50	.313	4.00	.500	1.94
7X 4X	.313/ .375T	7.08	59.0	15.7	100.1	2.6	1.7	6.4	3.69	7.38	.313	4.00	.375	2.53
6X 4X	.313/ .500T	7.45	53.1	16.0	88.5	2.4	1.7	5.5	3.88	6.50	.313	4.00	.500	2.25
7X 4X	.313/ .438T	7.56	61.0	17.4	110.1	2.7	1.8	6.3	3.94	7.44	.313	4.00	.438	2.54
6X 4X	.313/ .563T	7.93	54.6	17.5	96.0	2.5	1.8	5.5	4.13	6.56	.313	4.00	.563	2.27
7X 4X	.313/ .500T	8.04	62.9	19.1	120.1	2.8	1.9	6.3	4.19	7.50	.313	4.00	.500	2.56
6X 5X	.313/ .500T	8.41	55.5	19.1	102.0	2.6	1.8	5.3	4.38	6.50	.313	5.00	.500	2.25
7X 4X	.313/ .563T	8.52	64.5	20.9	130.1	2.9	2.0	6.2	4.44	7.56	.313	4.00	.563	2.58
7X 5X	.313/ .500T	9.00	65.4	22.6	137.7	3.0	2.1	6.1	4.69	7.50	.313	5.00	.500	2.56
8X 4X	.375/ .438T	9.12	70.7	21.6	151.0	3.1	2.1	7.0	4.75	8.44	.375	4.00	.438	3.42
7X 5X	.375/ .500T	9.60	67.1	24.8	143.2	3.1	2.2	6.0	5.00	7.56	.375	5.00	.563	2.58
8X 4X	.375/ .563T	9.60	72.6	23.5	163.2	3.2	2.2	6.9	5.00	8.50	.375	4.00	.500	3.45
9X 4X	.375/ .438T	9.85	80.4	25.2	194.1	3.5	2.4	7.7	5.13	9.44	.375	4.00	.438	3.80
8X 4X	.375/ .563T	10.09	74.3	25.4	175.0	3.3	2.4	6.9	5.25	8.56	.375	4.00	.563	3.47
9X 4X	.375/ .500T	10.33	82.5	27.3	209.1	3.6	2.5	7.7	5.38	9.50	.375	4.00	.500	3.82
8X 4X	.375/ .625T	10.56	76.0	27.3	187.0	3.4	2.5	6.9	5.50	8.63	.375	4.00	.625	3.49
7X 6X	.313/ .563T	10.63	69.0	28.6	166.8	3.2	2.4	5.8	5.56	7.56	.313	6.00	.563	2.58
9X 4X	.375/ .563T	11.16	84.3	29.4	223.3	3.7	2.6	7.6	5.63	9.56	.375	4.00	.563	3.84
8X 5X	.375/ .563T	11.81	77.2	29.8	198.9	3.5	2.6	6.7	5.81	8.56	.375	5.00	.563	3.47
9X 5X	.375/ .500T	11.29	85.5	31.7	235.4	3.7	2.8	7.4	5.88	9.50	.375	5.00	.500	3.82
8X 5X	.375/ .625T	11.77	78.7	32.2	212.9	3.5	2.7	6.6	6.13	8.63	.375	5.00	.625	3.49
9X 5X	.375/ .563T	11.88	87.4	34.3	252.4	3.8	2.9	7.4	6.19	9.56	.375	5.00	.563	3.84
8X 6X	.375/ .563T	12.25	79.4	34.3	221.5	3.6	2.8	6.5	6.38	8.56	.375	6.00	.563	3.47
9X 5X	.375/ .625T	12.48	89.1	36.9	269.1	3.9	3.0	7.3	6.50	9.63	.375	5.00	.625	3.87
9X 6X	.375/ .563T	12.96	89.8	39.2	279.7	4.0	3.1	7.1	6.75	9.56	.375	6.00	.563	3.84
10X 5X	.438/ .500T	13.21	95.9	37.7	302.5	4.1	3.2	8.0	6.88	10.50	.438	5.00	.500	4.90

0.6875 - 11/16 in.

680 IN. PLATE (AREA= 10.87 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			***** BEAM DIMENSIONS *****			***** FLANGE *****		SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	
9X 6X .375/.625T	13.69	91.5	42.3	290.5	4.1	3.3	7.1	7.13	9.63	6.00	.625	3.87
10X 5X .438/.563T	13.80	97.9	40.6	322.6	4.2	3.3	8.0	7.19	10.56	5.00	.563	4.93
10X 5X .438/.625T	14.40	99.7	43.3	341.7	4.3	3.4	7.9	7.50	10.63	5.00	.625	4.96
8X 6X .438/.688T	14.65	82.4	40.8	255.9	3.7	3.1	6.3	7.63	8.69	6.00	.688	4.11
9X 5X .438/.750T	14.76	92.3	43.4	307.9	4.1	3.3	7.1	7.69	9.75	5.00	.750	4.57
10X 6X .438/.563T	14.88	100.6	45.9	354.5	4.4	3.5	7.7	7.75	10.56	6.00	.563	4.93
10X 5X .438/.688T	15.00	101.4	46.2	361.1	4.4	3.6	7.8	7.81	10.69	5.00	.688	4.98
10X 6X .438/.625T	15.51	102.4	49.3	376.6	4.5	3.7	7.6	8.13	10.63	6.00	.625	4.96
9X 6X .438/.750T	16.20	94.6	49.8	340.4	4.2	3.6	6.8	8.44	9.75	6.00	.750	4.57
10X 6X .438/.688T	16.32	104.0	52.7	397.9	4.5	3.8	7.6	8.50	10.69	6.00	.688	4.98
9X 7X .438/.688T	16.50	95.1	52.5	351.0	4.2	3.7	6.7	8.75	9.69	7.00	.688	4.55
12X 5X .500/.563T	16.92	119.4	53.1	486.8	5.0	4.1	9.2	8.81	12.56	5.00	.563	6.62
10X 6X .438/.750T	17.05	105.7	56.2	419.8	4.6	4.0	7.5	8.88	10.75	6.00	.750	5.01
12X 5X .500/.625T	17.53	121.5	56.5	513.3	5.1	4.2	9.1	9.13	12.63	5.00	.625	6.66
10X 7X .438/.688T	17.64	106.2	59.3	432.8	4.6	4.1	7.3	9.19	10.69	7.00	.688	4.98
12X 6X .500/.563T	18.01	122.5	59.5	530.5	5.1	4.3	8.9	9.38	12.56	6.00	.563	6.62
12X 5X .500/.688T	18.12	123.4	59.8	538.9	5.2	4.4	9.0	9.44	12.69	5.00	.688	6.69
10X 7X .438/.750T	18.49	107.7	63.2	455.6	4.7	4.2	7.2	9.63	10.75	7.00	.750	5.01
12X 6X .500/.625T	18.72	124.7	63.5	560.2	5.2	4.5	8.8	9.75	12.63	6.00	.625	6.66
9X 8X .438/.750T	19.08	98.1	62.5	380.4	4.4	4.1	6.4	9.94	9.75	8.00	.750	4.57
12X 6X .500/.688T	19.45	126.6	67.4	588.5	5.3	4.6	8.7	10.13	12.69	6.00	.688	6.69
12X 5X .500/.875T	19.93	128.6	69.6	612.8	5.4	4.8	8.8	10.38	12.88	5.00	.875	6.78
12X 6X .500/.750T	20.16	128.5	71.4	616.9	5.4	4.8	8.6	10.50	12.75	6.00	.750	6.72
12X 7X .500/.688T	20.76	129.3	75.1	635.3	5.4	4.9	8.5	10.81	12.69	7.00	.688	6.69
12X 7X .500/.750T	21.60	131.2	79.9	667.0	5.5	5.1	8.4	11.25	12.75	7.00	.750	6.72
14X 6X .563/.625T	22.33	148.2	79.7	794.1	5.9	5.4	10.0	11.63	14.63	6.00	.625	8.62
12X 8X .500/.750T	23.04	133.4	88.1	713.1	5.6	5.3	8.1	12.00	12.75	8.00	.750	6.72
14X 6X .563/.688T	23.04	150.4	84.2	830.2	6.0	5.5	9.9	12.00	14.69	6.00	.688	8.66
12X 7X .500/.875T	23.29	134.4	88.9	726.1	5.6	5.4	8.2	12.13	12.88	7.00	.875	6.78
14X 6X .563/.750T	23.77	152.5	88.8	866.6	6.1	5.7	9.8	12.38	14.75	6.00	.750	8.69
14X 7X .563/.688T	24.36	153.7	93.1	891.6	6.2	5.8	9.6	12.69	14.69	7.00	.688	8.66
12X 8X .500/.875T	24.96	136.6	98.6	776.9	5.7	5.7	7.9	13.00	12.88	8.00	.875	6.78
14X 7X .563/.750T	25.21	155.8	98.4	930.8	6.2	6.0	9.5	13.13	14.75	7.00	.750	8.69
12X 7X .563/1.000T	26.40	138.3	99.7	793.0	5.7	5.7	8.0	13.75	13.00	8.00	1.000	7.71
14X 8X .563/.750T	26.65	158.5	107.9	991.0	6.3	6.3	9.2	13.88	14.75	7.00	.750	8.69
14X 7X .563/.875T	26.88	159.6	108.7	1006.8	6.4	6.3	9.3	14.00	14.88	7.00	.875	8.76
12X 8X .563/1.000T	28.32	140.5	110.6	846.9	5.7	6.0	7.7	14.75	13.00	8.00	1.000	7.71
14X 8X .563/.875T	28.57	162.4	119.8	1073.2	6.5	6.6	9.0	14.88	14.88	8.00	.875	8.76
14X 9X .563/.875T	30.24	164.7	130.7	1134.6	6.5	6.9	8.7	15.75	14.88	9.00	.875	8.76
14X 8X .563/1.000T	30.49	165.7	131.7	1151.4	6.6	6.9	8.7	15.88	15.00	8.00	1.000	8.83
14X 7X .625/1.125T	31.93	167.7	131.4	1165.7	6.5	6.9	8.9	16.63	15.13	7.00	1.125	9.89
12X 10X .563/1.000T	32.16	143.9	131.8	941.6	5.8	6.5	7.1	16.75	13.00	10.00	1.000	7.71
14X 9X .563/1.000T	32.41	168.0	144.1	1216.9	6.6	7.2	8.4	16.88	15.00	9.00	1.000	8.83
12X 9X .625/1.125T	33.85	148.2	133.7	964.9	5.8	6.6	7.2	17.63	13.13	9.00	1.125	8.64
14X 8X .625/1.125T	34.08	170.5	145.1	1239.8	6.6	7.3	8.5	17.75	15.13	8.00	1.125	9.89

0.6875 - 11/16 in.



0.688 IN. PLATE (AREA= 10.87 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	FLANGE THICK	AREA			
16X 7X .688/1.000T	34.56	192.6	145.4	1465.2	7.1	7.6	10.1	10.00	17.00	.688	7.00	1.000	12.17			
12X10X .625/1.125T	36.00	147.8	145.5	1013.2	5.8	6.9	7.0	18.75	13.13	.625	10.00	1.125	8.64			
16X 8X .688/1.000T	36.48	196.0	159.2	1553.5	7.2	7.9	9.8	19.00	17.00	.688	8.00	1.000	12.17			
16X 7X .688/1.250T	37.92	199.8	167.8	1636.1	7.3	8.2	9.7	19.75	17.25	.688	7.00	1.250	12.34			
16X 9X .688/1.000T	38.40	198.9	173.1	1637.3	7.3	8.2	9.5	20.00	17.00	.688	9.00	1.000	12.17			
18X 8X .750/.875T	39.36	221.8	172.3	1897.3	7.8	8.6	11.0	20.50	18.88	.750	8.00	.875	14.68			
14X 9X .688/1.250T	40.09	177.6	173.5	1398.6	6.6	7.9	8.1	20.88	15.25	.688	9.00	1.250	10.97			
16X10X .688/1.000T	40.32	201.5	186.8	1714.7	7.3	8.5	9.2	21.00	17.00	.688	10.00	1.000	12.17			
16X 9X .688/1.125T	40.57	202.6	187.3	1734.2	7.4	8.6	9.3	21.13	17.13	.688	9.00	1.125	12.26			
18X 9X .750/.875T	41.05	225.4	185.9	1993.6	7.9	8.8	10.7	21.38	18.88	.750	9.00	.875	14.68			
18X 8X .750/1.000T	41.28	226.6	186.7	2015.6	7.9	8.9	10.8	21.50	19.00	.750	8.00	1.000	14.77			
16X10X .688/1.125T	42.72	205.1	202.8	1817.1	7.4	8.9	9.0	22.25	17.13	.688	10.00	1.125	12.26			
16X11X .688/1.125T	44.89	207.3	218.0	1893.2	7.4	9.1	8.7	23.38	17.13	.688	11.00	1.125	12.26			
18X 9X .750/1.125T	45.37	234.6	218.3	2240.7	8.1	9.6	10.3	23.63	19.13	.750	9.00	1.125	14.86			
18X11X .750/1.000T	47.04	236.2	232.8	2308.4	9.1	9.8	9.9	24.50	19.00	.750	11.00	1.000	14.77			
18X 9X .750/1.250T	47.52	238.6	234.4	2357.4	8.1	9.9	10.1	24.75	19.25	.750	9.00	1.250	14.95			
18X11X .750/1.125T	49.69	240.5	252.0	2438.7	8.1	10.1	9.7	25.88	19.13	.750	11.00	1.125	14.86			
18X10X .750/1.250T	49.92	241.7	253.0	2464.7	8.2	10.2	9.7	26.00	19.25	.750	10.00	1.250	14.95			
18X12X .750/1.125T	51.84	242.9	269.0	2529.7	8.2	10.4	9.4	27.00	19.13	.750	12.00	1.125	14.86			
18X11X .750/1.250T	52.32	244.4	271.8	2565.6	8.2	10.5	9.4	27.25	19.25	.750	11.00	1.250	14.95			
21X 9X .875/1.125T	54.72	289.3	271.1	3193.2	9.8	11.0	11.8	28.50	22.13	.875	9.00	1.125	19.97			
18X 9X .875/1.500T	56.16	252.8	270.5	2638.1	8.1	10.4	9.8	29.25	19.50	.875	9.00	1.500	17.66			
21X10X .875/1.125T	56.89	293.5	290.4	3330.7	9.1	11.3	11.5	29.63	22.13	.875	10.00	1.125	19.97			
21X 9X .875/1.375T	59.04	299.2	306.8	3494.1	9.2	11.7	11.4	30.75	22.38	.875	9.00	1.375	20.18			
21X11X .875/1.125T	59.04	297.2	309.7	3480.6	9.1	11.6	11.2	30.75	22.13	.875	11.00	1.125	19.97			
21X12X .875/1.125T	61.21	300.6	329.3	3585.7	9.2	11.9	10.9	31.88	22.13	.875	12.00	1.125	19.97			
21X 9X .875/1.500T	61.21	303.6	324.5	3637.0	9.2	12.0	11.2	31.88	22.50	.875	9.00	1.500	20.29			
21X10X .875/1.375T	61.69	303.3	330.3	3647.5	9.2	12.0	11.0	32.13	22.38	.875	10.00	1.375	20.18			
21X11X .875/1.500T	64.09	307.8	350.1	3797.9	9.3	12.3	10.8	33.38	22.50	.875	10.00	1.500	20.29			
21X12X .875/1.375T	64.32	307.0	353.4	3789.8	9.2	12.3	10.7	33.50	22.38	.875	11.00	1.375	20.18			
21X11X .875/1.500T	66.97	311.4	374.9	3944.5	9.3	12.7	10.5	34.88	22.50	.875	11.00	1.500	20.29			
24X10X1.000/1.125T	67.68	357.0	353.3	4584.5	10.0	12.8	13.0	35.25	25.13	1.000	10.00	1.125	25.82			
21X13X .875/1.375T	69.60	313.3	399.0	4051.9	9.3	12.9	10.1	36.25	22.38	.875	13.00	1.375	20.18			
24X11X1.000/1.125T	69.85	361.8	374.7	4752.6	10.0	13.1	12.7	36.38	25.13	1.000	11.00	1.125	25.82			
21X12X .875/1.500T	69.85	314.7	400.2	4084.9	9.3	13.0	10.2	36.38	22.50	.875	12.00	1.500	20.29			
24X12X1.000/1.125T	72.00	366.3	396.3	4914.2	10.1	13.4	12.4	37.50	25.13	1.000	12.00	1.125	25.82			
21X14X .875/1.375T	72.25	316.0	422.3	4169.5	9.3	13.2	9.9	37.63	22.38	.875	14.00	1.375	28.18			
24X10X1.000/1.375T	72.48	369.3	397.6	4990.6	10.1	13.5	12.6	37.75	25.38	1.000	10.00	1.375	26.07			
21X13X .875/1.500T	72.73	317.6	424.8	4213.8	9.3	13.3	9.9	37.88	22.50	.875	13.00	1.500	20.29			
24X10X1.000/1.500T	74.88	374.9	419.4	5183.7	10.2	13.8	12.4	39.00	22.50	1.000	10.00	1.500	26.19			
24X11X1.000/1.375T	75.13	374.2	423.4	5178.0	10.2	13.8	12.2	39.13	22.38	1.000	11.00	1.375	26.07			
21X14X .875/1.500T	75.61	328.2	449.7	4337.0	9.3	13.5	9.6	39.38	22.50	.875	14.00	1.500	20.29			
24X11X1.000/1.500T	77.76	379.7	447.6	5379.9	10.2	14.2	12.0	40.50	25.50	1.000	11.00	1.500	26.19			
21X15X .875/1.500T	78.49	322.6	474.2	4451.7	9.3	13.8	9.4	40.88	22.50	.875	15.00	1.500	20.29			
24X10X1.000/1.750T	79.68	385.1	462.6	5555.9	10.3	14.4	12.0	41.50	25.75	1.000	10.00	1.750	26.44			

0.6875 - 11/16 in.

-.688 IN. PLATE (AREA= 10.87 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL							WEB THICK	FLANGE WIDTH	FLANGE THICK	
24X13X1.000/1.375T	88.41	382.6	475.7	5527.8	10.2	14.4	11.6	41.86	25.36	1.000	13.00	1.375	26.07
24X12X1.000/1.500T	80.64	384.2	475.6	5565.2	10.3	14.5	11.7	42.00	25.50	1.000	12.00	1.500	26.19
21X16X-.875/1.500T	81.37	324.8	438.8	4561.0	9.3	14.0	9.1	42.38	22.50	.875	16.00	1.500	20.29
24X11X1.000/1.750T	83.04	389.9	494.9	5765.9	10.3	14.8	11.7	43.25	25.75	1.000	11.00	1.750	26.44
24X14X1.000/1.375T	83.04	386.3	501.4	5687.8	10.3	14.7	11.3	43.25	25.38	1.000	14.00	1.375	26.07
24X13X1.000/1.500T	83.52	388.2	504.1	5743.0	10.3	14.8	11.4	43.50	25.50	1.000	13.00	1.500	26.19
24X15X1.000/1.375T	85.69	389.7	526.6	5838.0	10.3	15.0	11.1	44.63	25.38	1.000	15.00	1.375	26.07
24X12X1.000/1.750T	86.40	394.3	527.3	5963.8	10.3	15.1	11.3	45.00	25.75	1.000	12.00	1.750	26.44
24X14X1.000/1.500T	86.40	391.8	531.7	5907.3	10.3	15.1	11.1	45.00	25.50	1.000	14.00	1.500	26.19
24X15X1.000/1.500T	89.28	395.1	559.6	6064.5	10.3	15.3	10.8	46.50	25.50	1.000	15.00	1.500	26.19
24X13X1.000/1.750T	89.76	398.2	559.5	6150.1	10.3	15.4	11.0	46.75	25.75	1.000	13.00	1.750	26.44
27X12X1.125/1.375T	90.01	456.2	530.7	7130.6	11.1	15.6	13.4	46.88	28.38	1.125	12.00	1.375	32.70
27X13X1.125/1.375T	92.89	463.0	559.9	7397.2	11.2	16.0	13.2	48.38	28.50	1.125	12.00	1.500	32.84
27X12X1.125/1.500T	92.89	463.0	559.9	7397.2	11.2	16.0	13.2	48.38	28.50	1.125	12.00	1.500	32.84
24X14X1.000/1.750T	93.12	401.7	530.8	6321.7	10.3	15.7	10.7	48.50	25.75	1.000	14.00	1.750	26.44
27X14X1.125/1.375T	95.29	466.2	587.9	7557.3	11.2	16.2	12.9	49.63	28.38	1.125	14.00	1.375	32.70
27X13X1.125/1.500T	95.77	468.3	590.9	7625.0	11.2	16.3	12.9	49.88	28.50	1.125	13.00	1.500	32.84
24X15X1.000/1.750T	96.48	404.9	623.2	6409.0	10.3	16.0	10.4	50.25	25.75	1.000	15.00	1.750	26.44
27X12X1.125/1.750T	98.65	475.7	617.1	7907.3	11.3	16.6	12.8	51.38	28.75	1.125	12.00	1.750	33.12
27X15X1.125/1.500T	101.53	477.5	652.4	8046.9	11.2	16.9	12.3	52.88	28.50	1.125	15.00	1.500	32.84
27X13X1.125/1.750T	102.01	480.9	652.7	8150.6	11.3	16.9	12.5	53.13	28.75	1.125	13.00	1.750	33.12
27X12X1.125/2.000T	104.41	487.1	672.3	8385.4	11.3	17.2	12.5	54.38	29.00	1.125	12.00	2.000	33.40
27X14X1.125/1.750T	105.37	485.6	688.0	8380.2	11.3	17.3	12.2	54.88	28.75	1.125	14.00	1.750	33.12
27X13X1.125/2.000T	108.25	492.2	712.5	8642.4	11.3	17.6	12.1	56.38	29.00	1.125	13.00	2.000	33.40
30X15X1.250/1.500T	115.20	570.6	755.4	10463.0	12.2	18.3	13.9	60.00	31.50	1.250	15.00	1.500	40.23
30X16X1.250/1.500T	118.08	575.8	789.1	10715.5	12.2	18.6	13.6	61.50	31.50	1.250	16.00	1.500	40.23
30X14X1.250/1.750T	119.04	580.5	793.5	10874.6	12.2	18.7	13.7	62.00	31.75	1.250	14.00	1.750	40.55
30X17X1.250/1.750T	129.12	596.1	909.6	11601.7	12.2	19.6	12.8	67.25	31.75	1.250	17.00	1.750	40.55
30X15X1.250/2.000T	129.60	600.0	908.2	11810.2	12.3	19.7	13.0	67.50	32.00	1.250	15.00	2.000	40.86
30X16X1.250/2.000T	133.44	605.1	952.1	12093.7	12.3	20.0	12.7	69.50	32.00	1.250	16.00	2.000	40.86
33X17X1.375/1.750T	144.25	707.0	1036.6	14895.4	13.2	21.1	14.4	75.13	34.75	1.375	17.00	1.750	48.73
33X15X1.375/2.000T	144.73	711.2	1035.5	15046.9	13.2	21.2	14.5	75.38	35.00	1.375	15.00	2.000	49.07
33X16X1.375/2.000T	148.57	717.8	1092.8	15404.7	13.2	21.5	14.2	77.38	35.00	1.375	16.00	2.000	49.07
33X17X1.375/2.000T	152.41	723.9	1130.3	15748.3	13.2	21.8	13.9	79.38	35.00	1.375	17.00	2.000	49.07
36X16X1.500/1.750T	157.44	823.4	1130.0	18309.3	14.0	22.2	16.2	82.00	37.75	1.500	16.00	1.750	57.66
36X17X1.500/1.750T	160.80	831.1	1174.6	18708.8	14.1	22.5	15.9	83.75	37.75	1.500	17.00	1.750	57.66
36X15X1.500/2.000T	161.28	835.7	1173.7	18884.9	14.1	22.6	16.1	84.00	38.00	1.500	15.00	2.000	58.03
36X16X1.500/2.000T	165.12	843.9	1224.8	19329.9	14.1	22.9	15.8	86.00	38.00	1.500	16.00	2.000	58.03

0.6875 - 11/16 in.



.750 IN. PLATE (AREA = 12.94 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				INERTIA		R	VP	VF	AREA	DEPTH	WEB		FLANGE		SHEAR
WT/FT	ZPL	ZFL	ZPL	ZFL	INERTIA	THICK	WIDTH						THICK				
3X 2X .125/.188T	1.44	12.4	1.9	6.5	.7	.5	3.4	.75	3.19	.125	2.00	.188	.49				
3X 2X .188/.250T	2.04	14.8	2.5	8.5	.8	.6	3.4	1.06	3.25	.188	2.00	.250	.75				
3X 2X .188/.313T	2.28	16.5	2.9	10.0	.8	.6	3.5	1.19	3.31	.188	2.00	.313	.76				
4X 2X .188/.250T	2.40	22.5	3.4	14.9	1.0	.7	4.3	1.25	4.25	.188	2.00	.250	.94				
4X 2X .188/.313T	2.65	24.7	4.0	17.2	1.1	.7	4.4	1.38	4.31	.188	2.00	.313	.95				
3X 3X .188/.313T	2.88	19.8	4.0	13.4	1.0	.7	3.4	1.50	3.31	.188	3.00	.313	.76				
4X 3X .188/.313T	3.24	28.7	5.3	22.6	1.2	.8	4.3	1.69	4.31	.188	3.00	.313	.95				
3X 3X .250/.375T	3.61	21.6	4.8	16.2	1.0	.7	3.4	1.88	3.38	.250	3.00	.375	1.03				
3X 3X .250/.438T	3.96	23.3	5.3	18.2	1.1	.8	3.4	2.06	3.44	.250	3.00	.438	1.05				
4X 3X .250/.375T	4.09	31.3	6.4	27.4	1.3	.9	4.3	2.13	4.38	.250	3.00	.375	1.28				
5X 3X .250/.313T	4.20	38.9	7.3	37.2	1.6	1.0	5.1	2.19	5.31	.250	3.00	.313	1.52				
4X 3X .250/.438T	4.44	33.1	7.2	30.6	1.4	.9	4.3	2.31	4.44	.250	3.00	.438	1.30				
5X 3X .250/.375T	4.57	41.3	8.2	42.0	1.7	1.0	5.1	2.38	5.38	.250	3.00	.375	1.53				
6X 3X .250/.313T	4.68	49.0	9.1	54.1	1.9	1.1	6.0	2.44	6.31	.250	3.00	.313	1.77				
5X 3X .250/.438T	4.92	43.4	9.2	46.9	1.7	1.1	5.1	2.56	5.44	.250	3.00	.438	1.55				
6X 3X .250/.375T	5.05	51.7	10.2	60.8	2.0	1.2	6.0	2.63	6.38	.250	3.00	.375	1.78				
6X 3X .250/.438T	5.40	54.0	11.3	67.3	2.1	1.2	5.9	2.81	6.44	.250	3.00	.438	1.80				
6X 4X .250/.375T	5.76	55.5	12.5	72.7	2.1	1.3	5.8	3.00	6.38	.250	4.00	.375	1.70				
6X 4X .250/.438T	6.24	58.0	14.0	81.2	2.2	1.4	5.8	3.25	6.44	.250	4.00	.438	1.80				
5X 4X .313/.500T	6.84	48.9	13.2	64.9	2.0	1.3	4.9	3.56	5.50	.313	4.00	.500	1.96				
7X 4X .313/.375T	7.08	66.7	15.9	104.6	2.5	1.6	6.6	3.69	7.38	.313	4.00	.375	2.54				
6X 4X .313/.500T	7.45	60.2	16.3	92.8	2.3	1.5	5.7	3.88	6.50	.313	4.00	.500	2.27				
7X 4X .313/.438T	7.56	69.2	17.7	115.2	2.6	1.7	6.5	3.94	7.44	.313	4.00	.438	2.56				
6X 4X .313/.563T	7.93	62.1	17.7	100.8	2.4	1.6	5.7	4.13	6.56	.313	4.00	.563	2.29				
7X 4X .313/.500T	8.04	71.5	19.4	125.9	2.7	1.8	6.5	4.19	7.50	.313	4.00	.500	2.58				
6X 5X .313/.500T	8.41	63.1	19.3	107.3	2.5	1.7	5.6	4.38	6.50	.313	5.00	.500	2.27				
7X 4X .313/.563T	8.52	73.6	21.2	136.5	2.8	1.9	6.5	4.44	7.56	.313	4.00	.563	2.60				
7X 5X .313/.500T	9.00	74.7	22.9	144.8	2.9	1.9	6.3	4.69	7.50	.313	5.00	.500	2.58				
8X 4X .375/.438T	9.12	80.5	21.9	158.3	3.0	2.0	7.2	4.75	8.44	.375	4.00	.438	3.45				
7X 5X .313/.563T	9.60	76.7	25.1	157.2	3.0	2.0	6.3	5.00	7.56	.313	5.00	.563	2.60				
8X 4X .375/.500T	9.60	82.9	23.9	171.4	3.1	2.1	7.2	5.00	8.50	.375	4.00	.500	3.47				
9X 4X .375/.438T	9.85	91.9	25.5	203.6	3.4	2.2	8.0	5.13	9.44	.375	4.00	.438	3.82				
8X 4X .375/.563T	10.08	84.9	25.8	184.0	3.2	2.2	7.1	5.25	8.56	.375	4.00	.563	3.49				
9X 4X .375/.500T	10.33	94.4	27.7	219.6	3.5	2.3	7.9	5.38	9.50	.375	4.00	.500	3.84				
8X 4X .375/.625T	10.56	86.9	27.7	196.9	3.3	2.3	7.1	5.50	8.63	.375	4.00	.625	3.52				
7X 6X .313/.563T	10.68	79.2	29.0	176.4	3.1	2.2	6.1	5.56	7.56	.313	6.00	.563	2.60				
9X 4X .375/.563T	10.81	96.6	29.8	234.9	3.6	2.4	7.9	5.63	9.56	.375	4.00	.563	3.87				
8X 5X .375/.563T	11.16	88.5	30.2	209.9	3.3	2.4	6.9	5.81	8.56	.375	5.00	.563	3.49				
9X 5X .375/.500T	11.29	98.0	32.1	248.0	3.6	2.5	7.7	5.88	9.50	.375	5.00	.500	3.84				
8X 5X .375/.625T	11.77	90.4	32.7	225.0	3.4	2.5	6.9	6.13	8.63	.375	5.00	.625	3.52				
9X 5X .375/.563T	11.88	100.3	34.8	266.3	3.7	2.7	7.7	6.19	9.56	.375	5.00	.563	3.87				
8X 6X .375/.563T	12.25	91.2	34.8	234.5	3.5	2.6	6.7	6.38	8.56	.375	6.00	.563	3.49				
9X 5X .375/.625T	12.48	102.4	37.4	284.5	3.8	2.8	7.6	6.50	9.63	.375	5.00	.625	3.89				
9X 6X .375/.563T	12.96	103.3	39.8	296.1	3.9	2.9	7.4	6.75	9.56	.375	6.00	.563	3.87				
10X 5X .438/.500T	13.21	110.0	38.3	319.4	4.0	2.9	8.3	6.88	10.50	.438	5.00	.500	4.93				

0.7500 - 3/4 in.

.750 IN. PLATE (AREA= 12.94 SQ. IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****			SHEAR AREA					
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	THICK
9X 6X .375/.625T	13.69	105.3	42.9	316.7	4.0	3.0	7.4	7.13	9.63	.375	6.00	.625	3.89
10X 5X .438/.563T	13.80	112.4	41.2	341.1	4.1	3.0	8.3	7.19	10.56	.438	5.00	.563	4.95
10X 5X .438/.625T	14.40	114.5	44.0	361.6	4.2	3.2	8.2	7.50	10.63	.438	5.00	.625	4.98
8X 6X .438/.688T	14.65	94.9	41.4	272.3	3.6	2.9	6.6	7.63	8.69	.438	6.00	.688	4.13
9X 5X .438/.750T	14.76	106.1	44.1	325.9	4.0	3.1	7.4	7.69	9.75	.438	5.00	.750	4.60
10X 6X .438/.563T	14.88	115.6	46.6	375.8	4.3	3.3	8.1	7.75	10.56	.438	6.00	.563	4.95
10X 5X .438/.688T	15.00	116.6	46.9	382.8	4.3	3.3	8.2	7.81	10.69	.438	5.00	.688	5.01
10X 6X .438/.625T	15.61	117.8	50.1	392.9	4.4	3.4	8.0	8.13	10.63	.438	6.00	.625	4.98
9X 6X .438/.750T	16.20	109.0	50.6	362.7	4.1	3.3	7.2	8.44	9.75	.438	6.00	.750	4.60
10X 6X .438/.688T	16.32	119.8	53.5	423.2	4.4	3.5	7.9	8.50	10.69	.438	6.00	.688	5.01
9X 7X .438/.688T	16.80	109.7	53.3	374.6	4.2	3.4	7.0	8.75	9.69	.438	7.00	.688	4.57
12X 5X .500/.563T	16.92	136.9	54.1	515.8	4.9	3.8	9.5	8.81	12.56	.500	5.00	.563	6.66
10X 6X .438/.750T	17.05	121.8	57.2	447.3	4.5	3.7	7.8	8.88	10.75	.438	6.00	.750	5.04
12X 5X .500/.625T	17.53	139.4	57.5	544.5	5.0	3.9	9.5	9.13	12.63	.500	5.00	.625	6.69
10X 7X .438/.688T	17.64	122.5	60.2	461.8	4.6	3.8	7.7	9.19	10.69	.438	7.00	.688	5.01
12X 6X .500/.563T	18.01	140.7	60.5	563.4	5.0	4.0	9.3	9.38	12.56	.500	6.00	.563	6.66
12X 5X .500/.688T	18.12	141.7	60.9	572.4	5.1	4.0	9.4	9.44	12.69	.500	5.00	.688	6.72
10X 7X .438/.750T	18.49	124.3	64.2	487.0	4.6	3.9	7.6	9.63	10.75	.438	7.00	.750	5.04
12X 6X .500/.625T	18.72	143.2	64.6	595.8	5.1	4.2	9.2	9.75	12.63	.500	6.00	.625	6.69
9X 8X .438/.750T	19.08	113.3	63.5	427.3	4.3	3.8	6.7	9.94	9.75	.438	8.00	.750	4.60
12X 6X .500/.688T	19.45	145.5	68.6	626.7	5.2	4.3	9.1	10.13	12.69	.500	6.00	.688	6.72
12X 5X .500/.875T	19.93	147.8	70.9	653.1	5.3	4.4	9.2	10.38	12.88	.500	5.00	.875	6.82
12X 6X .500/.750T	20.16	147.7	72.7	657.8	5.3	4.5	9.0	10.50	12.75	.500	6.00	.750	6.75
12X 7X .500/.688T	20.76	148.7	76.4	678.2	5.3	4.6	8.9	10.81	12.69	.500	7.00	.688	6.72
12X 7X .500/.750T	21.60	150.9	81.3	713.2	5.4	4.7	8.8	11.25	12.75	.500	7.00	.750	6.75
14X 6X .563/.625T	22.33	169.7	81.3	845.6	5.9	5.0	10.4	11.63	14.63	.563	6.00	.625	8.66
12X 8X .500/.750T	23.04	153.6	89.7	768.4	5.5	5.0	8.5	12.00	12.75	.500	8.00	.750	6.75
14X 6X .563/.688T	23.04	172.3	85.9	885.0	6.0	5.1	10.3	12.00	14.69	.563	6.00	.688	8.69
12X 7X .500/.875T	23.29	154.7	90.6	778.6	5.6	5.0	8.6	12.13	12.88	.500	7.00	.875	6.82
14X 6X .563/.750T	23.77	174.8	90.6	924.8	6.0	5.3	10.2	12.38	14.75	.563	6.00	.750	8.73
14X 7X .563/.688T	24.36	176.1	94.9	952.4	6.1	5.4	10.0	12.69	14.69	.563	7.00	.688	8.69
12X 8X .500/.875T	24.96	157.3	100.4	835.4	5.7	5.3	8.3	13.00	12.88	.500	8.00	.875	6.82
14X 7X .563/.750T	25.21	178.5	100.3	995.5	6.2	5.6	9.9	13.13	14.75	.563	7.00	.750	8.73
12X 7X .563/1.000T	26.40	158.9	101.7	852.6	5.7	5.4	8.4	13.75	13.00	.563	7.00	1.000	7.74
14X 8X .563/.750T	26.65	161.8	110.0	1062.1	6.3	5.8	9.7	13.88	14.75	.563	8.00	.750	8.73
14X 7X .563/.875T	26.98	163.0	110.9	1079.3	6.3	5.9	9.7	14.00	14.88	.563	7.00	.875	8.80
12X 8X .563/1.000T	28.32	161.6	112.8	913.1	5.7	5.7	8.1	14.75	13.00	.563	8.00	1.000	7.74
14X 8X .563/.875T	28.57	186.2	122.2	1153.2	6.4	6.2	9.4	14.88	14.88	.563	8.00	.875	8.80
14X 9X .563/.875T	30.24	189.0	133.3	1224.9	6.5	6.5	9.2	15.75	14.88	.563	9.00	.875	8.80
14X 8X .563/1.000T	30.49	190.2	134.4	1248.2	6.6	6.5	9.2	15.88	15.00	.563	8.00	1.000	8.87
14X 7X .625/1.125T	31.93	191.9	134.3	1254.7	6.5	6.5	9.3	16.63	15.13	.625	7.00	1.125	9.93
12X 10X .563/1.000T	32.16	165.6	134.5	1020.4	5.9	6.2	7.6	16.75	13.00	.563	10.00	1.000	7.74
14X 9X .563/1.000T	32.41	192.8	147.0	1313.9	6.6	6.8	8.9	16.88	15.00	.563	9.00	1.000	8.87
12X 9X .625/1.125T	32.95	167.9	136.6	1045.2	5.8	6.2	7.7	17.63	13.13	.625	9.00	1.125	8.68
14X 8X .625/1.125T	34.08	195.1	148.2	1337.7	6.6	6.9	9.0	17.75	15.13	.625	8.00	1.125	9.93

0.7500 - 3/4 in.



.750 IN. PLATE (AREA= 12.94 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			INERTIA	R	YP	YF	AREA	DEPTH	DIMENSIONS			SHEAR AREA
		ZPL	ZFL	ZPL							WEB THICK	FLANGE WIDTH	FLANGE THICK	
16X 7X .688/1.000T	34.56	219.2	148.7	7.1	1572.7	7.1	7.2	10.6	18.00	17.00	.688	7.00	1.000	12.21
12X10X .625/1.125T	36.00	169.8	148.6	5.9	1100.1	5.9	6.5	7.4	18.75	13.13	.625	10.00	1.125	8.68
16X 8X .688/1.000T	36.48	223.1	162.8	7.2	1670.6	7.2	7.5	10.3	19.00	17.00	.688	8.00	1.000	12.21
16X 7X .688/1.250T	37.92	227.5	171.7	7.3	1761.4	7.3	7.7	10.3	19.75	17.25	.688	7.00	1.250	12.38
16X 9X .688/1.000T	38.40	226.6	177.0	7.3	1763.9	7.3	7.8	10.0	20.00	17.00	.688	9.00	1.000	12.21
18X 8X .750/.875T	39.36	251.3	176.4	7.8	2034.4	7.8	8.1	11.5	20.00	18.88	.750	8.00	.875	14.72
14X 9X .688/1.250T	40.09	202.9	177.5	6.7	1514.6	6.7	7.5	8.5	20.88	15.25	.688	9.00	1.250	11.01
16X10X .688/1.000T	40.32	229.5	191.0	7.4	1850.5	7.4	8.1	9.7	21.00	17.00	.688	10.00	1.000	12.21
16X 9X .688/1.125T	40.57	230.7	191.6	7.4	1871.7	7.4	8.1	9.8	21.13	17.13	.688	9.00	1.125	12.30
18X 9X .750/.875T	41.05	255.3	190.3	7.9	2140.6	7.9	8.4	11.2	21.38	18.88	.750	9.00	.875	14.72
18X 8X .750/1.000T	41.28	256.7	191.2	7.9	2164.3	7.9	8.4	11.3	21.50	19.00	.750	8.00	1.000	14.61
16X10X .688/1.125T	42.72	233.7	207.4	7.5	1964.7	7.5	8.4	9.5	22.25	17.13	.688	10.00	1.125	12.30
16X11X .688/1.125T	44.89	236.2	223.0	7.5	2050.6	7.5	8.7	9.2	23.38	17.13	.688	11.00	1.125	12.30
18X 9X .750/1.000T	45.37	265.7	223.5	8.1	2413.2	8.1	9.1	10.8	23.63	19.13	.750	9.00	1.125	14.91
18X11X .750/1.125T	47.04	267.5	238.3	8.2	2489.4	8.2	9.3	10.4	24.50	19.00	.750	11.00	1.000	14.61
18X 9X .750/1.250T	47.52	270.2	240.0	8.2	2542.5	8.2	9.4	10.6	24.75	19.25	.750	9.00	1.250	15.00
18X11X .750/1.125T	49.69	272.3	258.1	8.2	2634.2	8.2	9.7	10.2	25.88	19.13	.750	11.00	1.125	14.91
18X10X .750/1.250T	49.92	273.7	259.2	8.3	2662.4	8.3	9.7	10.3	26.00	19.25	.750	10.00	1.250	15.00
18X12X .750/1.125T	51.84	275.2	275.4	8.3	2736.3	8.3	9.9	9.9	27.00	19.13	.750	12.00	1.125	14.91
18X11X .750/1.250T	52.32	276.9	278.3	8.3	2775.6	8.3	10.0	10.0	27.25	19.25	.750	11.00	1.250	15.00
21X 9X .875/1.125T	54.72	324.5	278.0	9.1	3426.2	9.1	10.6	12.3	28.50	22.13	.875	9.00	1.125	20.02
18X 9X .875/1.500T	56.16	284.8	277.5	8.2	2846.3	8.2	10.0	10.3	29.25	19.50	.875	9.00	1.500	17.72
21X10X .875/1.125T	56.89	329.2	297.8	9.2	3577.5	9.2	10.9	12.0	29.63	22.13	.875	10.00	1.125	20.02
21X 9X .875/1.375T	59.04	335.5	314.8	9.3	3756.0	9.3	11.2	11.9	30.75	22.13	.875	9.00	1.375	20.24
21X11X .875/1.125T	59.04	333.4	317.5	9.2	3720.9	9.2	11.2	11.7	30.75	22.13	.875	11.00	1.125	20.02
21X12X .875/1.125T	61.21	337.1	337.6	9.3	3859.3	9.3	11.4	11.4	31.88	22.13	.875	12.00	1.125	20.02
21X 9X .875/1.500T	61.21	340.4	332.9	9.3	3913.1	9.3	11.5	11.8	31.88	22.50	.875	9.00	1.500	20.34
21X10X .875/1.375T	61.69	340.1	338.8	9.3	3925.8	9.3	11.5	11.6	32.13	22.38	.875	10.00	1.375	20.24
21X10X .875/1.500T	64.09	345.0	359.2	9.4	4091.4	9.4	11.9	11.4	33.38	22.50	.875	10.00	1.500	20.34
21X11X .875/1.375T	64.32	344.2	362.4	9.4	4083.5	9.4	11.9	11.3	33.50	22.38	.875	11.00	1.375	20.24
21X11X .875/1.500T	66.97	349.1	384.6	9.4	4254.5	9.4	12.2	11.1	34.88	22.50	.875	11.00	1.500	20.34
24X10X1.000/1.125T	67.68	396.7	362.7	10.1	4903.4	10.1	12.4	13.5	35.25	25.13	1.000	10.00	1.125	25.88
21X13X .875/1.375T	69.60	351.2	410.0	9.4	4375.6	9.4	12.5	10.7	36.25	22.38	.875	13.00	1.375	20.24
24X11X1.000/1.125T	69.85	402.0	384.6	10.2	5086.6	10.2	12.7	13.2	36.38	25.13	1.000	11.00	1.125	25.88
21X12X .875/1.500T	69.85	352.7	410.6	9.5	4411.1	9.5	12.5	10.7	36.38	22.50	.875	12.00	1.500	20.34
24X12X1.000/1.125T	72.00	406.9	406.6	10.2	5233.3	10.2	12.9	12.9	37.50	25.13	1.000	12.00	1.125	25.88
21X14X .875/1.375T	72.25	354.2	433.1	9.4	4507.0	9.4	12.7	10.4	37.53	22.38	.875	14.00	1.375	20.24
24X10X1.000/1.375T	72.48	410.1	408.1	10.3	5344.9	10.3	13.0	13.1	37.75	25.38	1.000	10.00	1.375	26.13
21X13X .875/1.500T	72.73	355.9	435.8	9.5	4555.2	9.5	12.8	10.5	37.88	22.50	.875	13.00	1.500	20.34
24X10X1.000/1.500T	74.88	416.2	430.5	10.3	5555.2	10.3	13.3	12.9	39.00	25.50	1.000	10.00	1.500	26.25
24X11X1.000/1.375T	75.13	415.5	434.5	10.3	5550.1	10.3	13.4	12.8	39.13	25.38	1.000	11.00	1.375	26.13
21X14X .875/1.500T	75.61	358.9	461.3	9.5	4693.2	9.5	13.1	10.2	39.38	22.50	.875	14.00	1.500	20.34
24X11X1.000/1.500T	77.76	421.6	459.3	10.4	5770.4	10.4	13.7	12.6	40.50	25.50	1.000	11.00	1.500	26.25
21X15X .875/1.500T	78.49	361.5	486.5	9.5	4822.1	9.5	13.3	9.9	40.88	22.50	.875	15.00	1.500	20.34
24X10X1.000/1.750T	79.68	427.4	475.0	10.5	5961.4	10.5	13.9	12.6	41.50	25.75	1.000	10.00	1.750	26.50

0.7500 - 3/4 in.

.750 IN. PLATE (AREA= 12.94 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL						WEB THICK	FLANGE WIDTH	FLANGE THICK	
24X13X1.000/1.375T	80.41	424.8	488.0	10.4	14.0	12.2	41.88	25.38	1.000	13.00	1.375	26.13
24X12X1.000/1.500T	80.64	426.4	488.1	10.4	14.0	12.2	42.00	25.50	1.000	12.00	1.500	26.25
21X16X1.875/1.500T	81.37	364.0	511.8	9.5	13.6	9.7	42.38	22.50	.875	16.00	1.500	20.34
24X11X1.000/1.750T	83.04	432.7	508.1	10.5	14.3	12.2	43.25	25.75	1.000	11.00	1.750	26.50
24X10X1.000/1.375T	83.04	428.8	514.4	10.4	14.2	11.9	43.25	25.38	1.000	14.00	1.375	26.13
24X13X1.000/1.500T	83.52	430.8	517.3	10.5	14.3	11.9	43.50	25.50	1.000	13.00	1.500	26.25
24X11X1.000/1.375T	85.69	432.5	540.2	10.4	14.5	11.6	44.53	25.38	1.000	15.00	1.375	26.13
24X12X1.000/1.750T	86.40	437.5	541.2	10.5	14.7	11.8	45.00	25.75	1.000	12.00	1.750	26.50
24X11X1.000/1.500T	86.40	434.8	545.6	10.5	14.6	11.6	45.00	25.50	1.000	14.00	1.500	26.25
24X15X1.000/1.500T	89.28	438.4	574.1	10.5	14.9	11.4	46.50	25.75	1.000	15.00	1.500	26.25
24X13X1.000/1.750T	89.76	441.8	574.3	10.5	15.0	11.5	46.75	25.75	1.000	13.00	1.750	26.50
27X12X1.125/1.375T	90.01	501.9	544.7	11.3	15.2	14.0	46.88	28.38	1.125	12.00	1.375	32.77
27X13X1.125/1.375T	92.64	507.6	574.4	11.3	15.5	13.7	48.25	28.38	1.125	13.00	1.375	32.77
27X12X1.125/1.500T	92.89	509.4	574.5	11.3	15.5	13.7	48.38	28.50	1.125	12.00	1.500	32.91
24X14X1.000/1.750T	93.12	445.6	606.4	10.5	15.3	11.2	48.50	25.75	1.000	14.00	1.750	26.50
27X14X1.125/1.375T	95.29	512.8	603.1	11.4	15.7	13.4	49.63	28.38	1.125	14.00	1.375	32.77
27X13X1.125/1.500T	95.77	515.0	606.3	11.4	15.8	13.4	49.88	28.50	1.125	13.00	1.500	32.91
24X15X1.000/1.750T	96.48	449.2	639.7	10.5	15.6	10.9	50.25	25.75	1.000	15.00	1.750	26.50
27X12X1.125/1.750T	98.65	523.0	633.3	11.5	16.2	13.3	51.38	28.75	1.125	12.00	1.750	33.19
27X15X1.125/1.500T	101.53	525.0	669.3	11.4	16.4	12.9	52.88	28.50	1.125	15.00	1.500	32.91
27X13X1.125/1.750T	102.01	528.7	669.8	11.5	16.5	13.0	53.13	28.75	1.125	13.00	1.750	33.19
27X12X1.125/2.000T	104.41	535.3	690.1	11.5	16.8	13.0	54.38	29.00	1.125	12.00	2.000	33.47
27X14X1.125/1.750T	105.37	533.8	705.9	11.5	16.8	12.7	54.88	28.75	1.125	14.00	1.750	33.19
27X13X1.125/2.000T	108.25	540.9	731.3	11.6	17.1	12.6	56.38	29.00	1.125	13.00	2.000	33.47
30X11X1.250/1.500T	115.20	622.2	774.6	12.4	17.9	14.4	60.00	31.50	1.250	15.00	1.500	40.31
30X16X1.250/1.500T	118.08	627.8	809.0	12.4	18.2	14.1	61.50	31.50	1.250	16.00	1.500	40.31
30X11X1.250/1.750T	119.04	632.8	813.7	12.4	18.3	14.2	62.00	31.75	1.250	14.00	1.750	40.63
30X17X1.250/1.750T	129.12	649.5	932.5	12.5	19.2	13.3	67.25	31.75	1.250	15.00	1.750	40.63
30X15X1.250/2.000T	129.60	653.7	931.3	12.5	19.2	13.3	67.50	32.00	1.250	15.00	2.000	40.94
30X16X1.250/2.000T	133.44	659.1	976.3	12.5	19.6	13.2	69.50	32.00	1.250	16.00	2.000	40.94
33X11X1.375/1.750T	144.25	764.5	1061.8	13.4	20.6	14.9	75.13	34.75	1.375	17.00	1.750	48.81
33X15X1.375/2.000T	144.73	768.9	1060.9	13.4	20.7	15.0	75.38	35.00	1.375	15.00	2.000	49.16
33X16X1.375/2.000T	148.57	775.9	1109.3	13.4	21.0	14.7	77.38	35.00	1.375	16.00	2.000	49.16
33X17X1.375/2.000T	152.41	782.4	1157.9	13.4	21.3	14.4	79.38	35.00	1.375	17.00	2.000	49.16
36X11X1.500/1.750T	157.44	884.4	1156.6	14.3	21.8	16.7	82.00	37.75	1.500	16.00	1.750	57.75
36X17X1.500/1.750T	160.80	892.5	1202.1	14.3	22.1	16.4	83.75	37.75	1.500	17.00	1.750	57.75
36X15X1.500/2.000T	161.28	897.3	1201.3	14.3	22.2	16.6	84.00	38.00	1.500	15.00	2.000	58.13
36X16X1.500/2.000T	165.12	906.0	1253.5	14.4	22.5	16.3	86.00	38.00	1.500	16.00	2.000	58.13

0.7500 - 3/4 in.



0.875 IN. PLATE (AREA= 17.61 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		R	YP	VF	***** BEAM DIMENSIONS *****		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA				DEPTH	WEB THICK	
							AREA	THICK	FLANGE
								WIDTH	THICK
3X 2X .125/.188T	1.44	13.3	2.1	7.3	.6	3.5	.75	.125	.188
3X 2X .188/.250T	2.04	16.1	2.7	9.5	.7	3.5	1.06	.188	.250
3X 2X .188/.313T	2.28	18.1	3.1	11.1	.8	3.6	1.19	.188	.313
4X 2X .188/.250T	2.40	24.6	3.6	16.1	.9	4.5	1.25	.188	.250
4X 2X .188/.313T	2.65	27.2	4.1	18.7	1.0	4.5	1.38	.188	.313
3X 3X .188/.313T	2.88	22.0	4.2	14.8	.9	3.5	1.50	.188	.313
4X 3X .188/.313T	3.24	32.3	5.5	24.4	1.1	4.4	1.69	.188	.313
3X 3X .250/.375T	3.61	24.6	5.0	17.8	1.0	3.5	1.88	.250	.375
3X 3X .250/.438T	3.96	26.5	5.6	20.0	1.0	3.6	2.06	.250	.438
4X 3X .250/.375T	4.09	35.9	6.7	29.6	1.2	4.4	2.13	.250	.375
5X 3X .250/.313T	4.20	44.9	7.5	39.9	1.4	5.3	2.19	.250	.313
4X 3X .250/.438T	4.44	38.3	7.4	33.1	1.3	4.4	2.31	.250	.438
5X 3X .250/.375T	4.57	48.1	8.5	45.1	1.5	5.3	2.38	.250	.375
6X 3X .250/.313T	4.68	57.5	9.3	57.7	1.7	6.2	2.44	.250	.313
5X 3X .250/.438T	4.92	51.1	9.5	50.4	1.6	5.3	2.56	.250	.438
6X 3X .250/.375T	5.05	61.2	10.5	65.0	1.8	6.2	2.63	.250	.375
6X 3X .250/.438T	5.40	64.5	11.6	72.0	1.9	6.2	2.81	.250	.438
6X 4X .250/.375T	5.76	66.7	12.8	78.0	1.9	6.1	3.00	.250	.375
6X 4X .250/.438T	6.24	70.2	14.4	87.3	2.0	6.2	3.25	.250	.438
5X 4X .313/.500T	6.84	59.1	13.6	70.4	1.8	5.2	3.56	.313	.500
7X 4X .313/.375T	7.08	81.4	16.3	112.3	2.3	6.9	3.69	.313	.375
6X 4X .313/.500T	7.45	73.7	16.7	100.3	2.2	6.0	3.88	.313	.500
7X 4X .313/.438T	7.56	85.0	18.1	124.0	2.4	6.9	3.94	.313	.438
6X 4X .313/.563T	7.93	76.4	18.2	109.2	2.2	6.0	4.13	.313	.563
8X 4X .313/.500T	8.04	88.3	19.9	135.9	2.5	6.8	4.19	.313	.500
6X 5X .313/.500T	8.41	78.1	19.8	116.6	2.3	5.9	4.38	.313	.500
7X 4X .313/.563T	8.52	91.3	21.7	147.7	2.6	6.8	4.44	.313	.563
7X 5X .313/.500T	9.00	93.2	23.5	157.1	2.7	6.7	4.69	.313	.500
8X 4X .375/.438T	9.12	100.0	22.5	170.9	2.8	7.6	4.75	.375	.438
7X 5X .313/.563T	9.60	96.2	25.7	171.1	2.8	6.7	5.00	.375	.563
8X 4X .375/.500T	9.60	103.4	24.5	185.5	2.9	7.6	5.00	.375	.500
9X 4X .375/.438T	9.85	114.9	26.2	219.9	3.1	8.4	5.13	.375	.438
8X 4X .375/.563T	10.08	106.3	26.4	199.6	3.0	7.6	5.25	.375	.563
9X 4X .375/.500T	10.33	118.4	28.4	237.7	3.2	8.4	5.38	.375	.500
8X 4X .375/.625T	10.56	109.2	28.4	214.1	3.0	7.5	5.50	.375	.625
7X 6X .313/.563T	10.68	99.9	29.7	193.0	2.9	6.5	5.56	.313	.563
8X 4X .375/.563T	10.81	121.6	30.6	254.9	3.3	8.3	5.63	.375	.563
8X 5X .375/.563T	11.16	111.5	31.0	228.8	3.1	7.4	5.81	.375	.563
9X 5X .375/.500T	11.29	123.8	32.9	269.7	3.4	8.2	6.13	.375	.500
8X 5X .375/.625T	11.77	114.4	33.5	246.1	3.2	7.4	6.30	.375	.625
9X 5X .375/.563T	11.88	127.0	35.6	290.4	3.5	8.1	6.19	.375	.563
8X 6X .375/.563T	12.25	115.7	35.6	257.0	3.3	7.2	6.30	.375	.563
9X 5X .375/.625T	12.48	130.0	38.3	311.0	3.6	8.1	6.50	.375	.625
9X 6X .375/.563T	12.96	131.5	40.7	324.5	3.6	8.0	6.75	.375	.563
10X 5X .438/.500T	13.21	139.3	39.3	348.6	3.8	8.9	6.88	.438	.500

0.8750 - 7/8 in.

.875 IN. PLATE (AREA= 17.61 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	Y <sub>P</sub>	V <sub>F</sub>	***** BEAM DIMENSIONS *****				SHEAR AREA	
	W <sub>T</sub> /FT	Z <sub>FL</sub>	Z <sub>PL</sub>				INERTIA	DEPTH	WEB THICK	FLANGE WIDTH		THICK
9X 6X .375/.625T	13.69	134.4	44.0	3.8	2.6	7.9	7.13	9.63	.375	6.00	.625	3.94
10X 5X .438/.563T	13.80	142.8	42.3	3.9	2.6	8.8	7.19	10.56	.438	5.00	.563	5.01
10X 5X .438/.625T	14.40	145.8	45.2	4.0	2.7	8.8	7.50	10.63	.438	5.00	.625	5.04
8X 6X .438/.688T	14.65	120.9	42.5	3.5	2.5	7.1	7.63	8.69	.438	6.00	.688	4.19
9X 5X .438/.750T	14.76	135.3	45.2	3.8	2.7	8.0	7.69	9.75	.438	5.00	.750	4.65
10X 6X .438/.563T	14.88	147.4	47.8	4.0	2.8	8.6	7.75	10.56	.438	6.00	.563	5.01
10X 5X .438/.688T	15.00	148.7	48.2	4.2	2.8	8.7	7.81	10.69	.438	5.00	.688	5.07
10X 6X .438/.625T	15.61	150.5	51.4	4.1	2.9	8.6	8.13	10.63	.438	6.00	.625	5.04
9X 6X .438/.750T	16.20	139.6	51.9	3.9	2.9	7.7	8.44	9.75	.438	6.00	.750	4.65
10X 6X .438/.688T	16.32	153.3	54.9	4.2	3.1	8.5	8.50	10.69	.438	6.00	.688	5.05
9X 7X .438/.688T	16.80	140.6	54.7	4.0	3.0	7.6	8.75	9.69	.438	7.00	.688	4.63
12X 5X .500/.563T	16.92	174.3	55.7	4.6	3.3	10.2	8.81	12.56	.500	5.00	.563	6.72
10X 6X .438/.750T	17.05	156.1	58.7	4.3	3.2	8.4	8.88	10.75	.438	6.00	.750	5.09
12X 5X .500/.625T	17.53	177.7	59.2	4.7	3.4	10.1	9.13	12.63	.500	5.00	.625	6.75
10X 7X .438/.688T	17.64	157.2	61.8	4.4	3.3	8.3	9.19	10.69	.438	7.00	.688	5.07
12X 6X .500/.563T	18.01	179.6	62.3	4.8	3.5	10.0	9.38	12.56	.500	6.00	.563	6.72
12X 5X .500/.688T	18.12	180.9	62.7	4.8	3.5	10.1	9.44	12.69	.500	5.00	.688	6.78
10X 7X .438/.750T	18.49	159.8	65.9	4.5	3.4	8.2	9.63	10.75	.438	7.00	.750	5.09
12X 6X .500/.625T	18.72	183.1	66.5	4.9	3.6	9.9	9.75	12.63	.500	6.00	.625	6.75
9X 8X .438/.750T	19.08	146.0	65.2	4.2	3.3	7.3	9.94	9.75	.438	8.00	.750	4.65
12X 6X .500/.688T	19.45	186.2	70.6	5.0	3.7	9.8	10.13	12.69	.500	6.00	.688	6.78
12X 5X .500/.875T	19.93	189.2	73.0	5.1	3.8	9.9	10.38	12.88	.500	5.00	.875	6.88
12X 6X .500/.750T	20.16	189.2	74.8	5.1	3.9	9.8	10.50	12.75	.500	6.00	.750	6.81
12X 7X .500/.688T	20.76	190.7	78.6	5.2	4.0	9.6	10.81	12.69	.500	7.00	.688	6.78
12X 7X .500/.750T	21.60	193.7	83.6	5.3	4.1	9.5	11.25	12.75	.500	7.00	.750	6.81
14X 6X .563/.625T	22.33	216.4	84.0	5.7	4.3	11.2	11.63	14.63	.563	6.00	.625	8.73
12X 8X .500/.750T	23.04	197.5	92.3	5.4	4.3	9.3	12.00	12.75	.500	8.00	.750	6.81
14X 6X .563/.688T	23.04	219.9	88.7	5.8	4.5	11.1	12.00	14.69	.563	6.00	.688	8.76
12X 7X .500/.875T	23.29	199.0	93.2	5.4	4.4	9.4	12.13	12.88	.500	7.00	.875	6.88
14X 6X .563/.750T	23.77	223.2	93.5	5.9	4.6	11.0	12.38	14.75	.563	6.00	.750	8.80
14X 7X .563/.688T	24.36	225.1	98.0	5.9	4.7	10.8	12.69	14.69	.563	7.00	.688	8.76
12X 8X .500/.875T	24.96	202.7	103.4	5.5	4.6	9.1	13.00	12.88	.500	8.00	.875	6.88
14X 7X .563/.750T	25.21	228.3	103.5	6.0	4.9	10.8	13.13	14.75	.563	7.00	.750	8.80
12X 7X .563/1.000T	26.40	204.1	104.9	5.5	4.7	9.2	13.75	13.00	.563	7.00	1.000	7.81
14X 8X .563/.750T	26.65	232.7	113.5	6.2	5.1	10.5	13.88	14.75	.563	8.00	.750	8.80
14X 7X .563/.875T	26.88	234.3	114.5	6.2	5.2	10.6	14.00	14.88	.563	7.00	.875	8.87
12X 8X .563/1.000T	28.32	207.8	116.4	5.7	5.0	8.9	14.75	13.00	.563	8.00	1.000	7.81
14X 8X .563/.875T	28.57	238.7	126.1	6.3	5.4	10.3	14.88	14.88	.563	8.00	.875	8.87
14X 9X .563/.875T	30.24	242.4	137.6	6.4	5.7	10.0	15.75	14.88	.563	9.00	.875	8.87
14X 8X .563/1.000T	30.49	243.9	138.8	6.5	5.8	10.1	15.88	15.00	.563	8.00	1.000	8.94
14X 7X .625/1.125T	31.93	245.3	139.0	6.4	5.8	10.2	16.63	15.13	.625	7.00	1.125	18.00
12X 10X .563/1.000T	32.16	213.5	138.8	5.8	5.5	8.4	16.75	13.00	.563	10.00	1.000	7.81
14X 9X .563/1.000T	32.41	247.6	151.9	6.6	6.0	9.8	16.88	15.00	.563	9.00	1.000	8.94
12X 9X .625/1.125T	33.85	215.7	141.3	5.8	5.5	8.5	17.63	13.13	.625	9.00	1.125	8.75
14X 8X .625/1.125T	34.08	249.6	153.5	6.6	6.1	9.9	17.75	15.13	.625	8.00	1.125	10.00

0.8750 - 7/8 in.



.875 IN. PLATE (AREA= 17.61 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS		FLANGE		SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	WIDTH	THICK	THICK	
16X 7X .688/1.000T	34.56	278.2	154.3	1773.8	7.1	6.4	11.5	18.00	17.00	.688	7.00	1.000	.688	12.30
12X10X .625/1.125T	36.00	218.4	153.9	1264.1	5.9	5.8	8.2	18.75	13.13	.625	10.00	1.125	.625	8.75
16X 8X .688/1.000T	36.48	283.3	168.8	1891.0	7.2	6.7	11.2	19.00	17.00	.688	8.00	1.000	.688	12.30
16X 7X .688/1.250T	37.92	288.8	178.3	1998.1	7.3	6.9	11.2	19.75	17.25	.688	7.00	1.250	.688	12.47
16X 9X .688/1.000T	38.40	287.8	183.6	2003.5	7.3	7.0	10.9	20.00	17.00	.688	9.00	1.000	.688	12.30
18X 8X .750/ .875T	39.36	316.6	183.4	2294.2	7.8	7.2	12.5	20.50	18.88	.750	8.00	.875	.750	14.82
14X 9X .688/1.250T	40.09	258.9	194.1	1735.2	6.7	6.7	9.4	20.88	15.25	.688	9.00	1.250	.688	11.09
16X10X .688/1.000T	40.32	291.7	198.1	2108.7	7.4	7.2	10.6	21.00	17.00	.688	10.00	1.000	.688	12.30
16X 9X .688/1.125T	40.57	293.2	198.8	2133.2	7.4	7.3	10.7	21.13	17.13	.688	9.00	1.125	.688	12.39
18X 9X .750/ .875T	41.05	321.8	197.8	2420.4	7.9	7.5	12.2	21.38	18.88	.750	9.00	.875	.750	14.82
18X 8X .750/1.000T	41.28	323.5	198.8	2447.5	7.9	7.6	12.3	21.50	19.00	.750	8.00	1.000	.750	14.91
16X10X .688/1.125T	42.72	297.1	215.2	2247.1	7.5	7.6	10.4	22.25	17.13	.688	10.00	1.125	.688	12.39
16X11X .688/1.125T	44.89	300.4	231.3	2353.0	7.6	7.8	10.2	23.38	19.13	.750	9.00	1.125	.750	15.00
18X 9X .750/1.125T	45.37	335.0	232.4	2744.9	8.2	8.2	11.8	23.63	19.13	.750	11.00	1.000	.750	14.91
18X11X .750/1.000T	47.04	337.4	247.6	2838.6	8.2	8.4	11.5	24.50	19.00	.750	9.00	1.250	.750	15.09
18X 9X .750/1.250T	47.52	340.7	249.7	2899.9	8.3	8.5	11.6	24.75	19.25	.750	9.00	1.250	.750	15.09
18X11X .750/1.125T	49.69	343.5	268.3	3013.4	8.3	8.8	11.2	25.88	19.13	.750	11.00	1.125	.750	15.00
18X10X .750/1.250T	49.92	345.2	269.6	3046.2	8.4	8.8	11.3	26.00	19.25	.750	10.00	1.250	.750	15.09
18X12X .750/1.125T	51.84	347.1	286.3	3138.7	8.4	9.0	11.0	27.00	19.13	.750	12.00	1.125	.750	15.00
21X 9X .875/1.125T	54.72	403.3	290.2	3882.2	9.2	9.6	13.4	28.50	22.13	.875	9.00	1.125	.875	20.13
18X 9X .875/1.250T	54.72	356.2	289.5	3165.2	8.4	9.1	11.0	27.25	19.25	.750	11.00	1.250	.750	15.09
21X10X .875/1.125T	56.16	409.0	310.8	4062.5	9.3	9.9	13.1	29.63	22.13	.875	9.00	1.125	.875	20.13
21X 9X .875/1.375T	59.04	416.7	328.6	4272.4	9.4	10.3	13.0	30.75	22.38	.875	9.00	1.375	.875	20.35
21X11X .875/1.125T	59.04	414.2	331.2	4233.9	9.4	10.2	12.8	30.75	22.13	.875	11.00	1.125	.875	20.13
21X12X .875/1.125T	61.21	418.9	352.0	4400.5	9.4	10.5	12.5	31.88	22.13	.875	12.00	1.125	.875	20.13
21X 9X .875/1.500T	61.21	422.7	347.7	4459.1	9.5	10.5	12.8	31.88	22.50	.875	9.00	1.500	.875	20.45
21X10X .875/1.375T	61.69	422.4	353.7	4476.6	9.5	10.6	12.7	32.13	22.38	.875	10.00	1.375	.875	20.35
21X10X .875/1.500T	64.09	428.5	375.0	4674.6	9.6	10.9	12.5	33.38	22.50	.875	10.00	1.500	.875	20.45
21X11X .875/1.375T	66.97	433.5	401.6	4667.3	9.6	10.9	12.3	33.50	22.38	.875	11.00	1.375	.875	20.35
24X10X1.000/1.125T	67.68	485.7	379.5	5539.9	10.2	11.4	14.6	35.25	25.13	1.000	10.00	1.125	1.000	26.01
21X13X .875/1.375T	69.60	436.3	427.9	5023.3	9.7	11.5	11.7	36.25	22.38	.875	13.00	1.375	.875	28.35
24X11X1.000/1.125T	69.85	492.1	402.2	5755.3	10.3	11.7	14.3	36.38	25.13	1.000	11.00	1.125	1.000	26.01
21X12X .875/1.500T	69.85	438.0	428.6	5064.0	9.7	11.6	11.8	36.38	22.50	.875	12.00	1.500	.875	20.45
24X12X1.000/1.125T	72.00	498.0	425.1	5963.8	10.4	12.0	14.0	37.50	25.13	1.000	12.00	1.125	1.000	26.01
21X14X .875/1.375T	72.25	439.9	452.0	5184.6	9.7	11.8	11.5	37.63	22.38	.875	14.00	1.375	.875	28.35
24X10X1.000/1.375T	72.48	501.8	426.9	6056.2	10.5	12.1	14.2	37.75	25.38	1.000	10.00	1.375	1.000	26.26
21X13X .875/1.500T	72.73	442.0	455.0	5241.0	9.7	11.9	11.5	37.88	22.50	.875	13.00	1.500	.875	20.45
24X10X1.000/1.500T	74.88	509.1	450.4	6303.2	10.6	12.4	14.0	39.00	25.50	1.000	10.00	1.500	1.000	26.38
24X11X1.000/1.375T	75.13	508.3	454.5	6299.4	10.5	12.4	13.9	39.13	25.38	1.000	11.00	1.375	1.000	26.26
21X14X .875/1.500T	75.61	445.7	481.7	5411.4	9.7	12.1	11.2	39.38	22.50	.875	14.00	1.500	.875	20.45
24X11X1.000/1.500T	77.76	515.5	480.5	6559.3	10.6	12.7	13.7	40.50	25.50	1.000	11.00	1.500	1.000	26.38
21X15X .875/1.500T	78.49	449.0	508.0	5571.2	9.8	12.4	11.0	40.88	22.50	.875	15.00	1.500	.875	20.45
24X10X1.000/1.750T	79.68	522.4	497.1	6782.2	10.7	13.0	13.6	41.50	25.75	1.000	10.00	1.750	1.000	26.63

0.8750 - 7/8 in.

0.875 IN. PLATE (AREA= 17.61 SQ.IN.)

***** BEAM DIMENSIONS *****													
SECTION MODULUS				FLANGE				WEB		SHEAR			
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WIDTH	THICK	AREA	
80.41	519.5	510.2	6750.3	10.7	13.0	13.2	41.88	25.38	1.000	13.00	1.375	26.26	
80.64	521.4	510.5	6802.8	10.7	13.0	13.3	42.00	25.50	1.000	12.00	1.500	26.38	
81.37	452.0	534.5	5724.5	9.8	12.7	10.7	42.38	22.50	0.875	16.00	1.500	28.45	
83.04	528.8	531.7	7059.1	10.8	13.3	13.3	43.25	25.75	1.000	11.00	1.750	26.63	
83.04	524.4	537.6	6969.8	10.7	13.3	13.0	43.25	25.38	1.000	14.00	1.375	26.26	
83.52	526.7	540.9	7038.5	10.7	13.4	13.0	43.50	25.50	1.000	13.00	1.500	26.38	
85.69	528.8	564.7	7169.5	10.7	13.6	12.7	44.63	25.38	1.000	15.00	1.375	26.26	
86.40	534.6	566.4	7322.2	10.8	13.7	12.9	45.00	25.75	1.000	12.00	1.750	26.63	
86.40	531.5	570.4	7256.9	10.8	13.7	12.7	45.00	25.50	1.000	14.00	1.500	26.38	
89.28	535.9	600.2	7467.5	10.8	13.9	12.4	46.50	25.50	1.000	15.00	1.500	26.38	
89.76	539.8	601.8	7571.5	10.8	14.0	12.6	46.75	25.75	1.000	13.00	1.750	26.63	
90.01	604.9	570.3	8587.1	11.5	14.2	15.1	46.88	28.38	1.125	12.00	1.375	32.91	
92.64	611.6	601.2	8686.8	11.6	14.5	14.8	48.25	28.38	1.125	13.00	1.375	32.91	
92.89	613.6	601.5	8922.7	11.6	14.5	14.8	48.38	28.50	1.125	12.00	1.500	33.85	
93.12	544.4	634.6	7802.1	10.9	14.3	12.3	48.50	25.75	1.000	14.00	1.750	26.63	
95.29	617.7	631.1	9131.8	11.7	14.8	14.5	49.63	28.38	1.125	14.00	1.375	32.91	
95.77	620.3	634.6	9214.3	11.7	14.9	14.5	49.88	28.50	1.125	13.00	1.500	33.05	
96.48	548.8	669.4	8028.8	10.9	14.6	12.0	50.25	25.75	1.000	15.00	1.750	26.63	
98.65	629.6	663.1	9568.0	11.8	15.2	14.4	51.38	28.75	1.125	12.00	1.750	33.33	
101.53	632.0	700.2	9758.1	11.8	15.4	13.9	52.88	28.50	1.125	15.00	1.500	33.85	
102.01	636.2	701.2	9882.2	11.8	15.5	14.1	53.13	28.75	1.125	13.00	1.750	33.33	
104.41	644.0	722.9	10175.1	11.9	15.8	14.1	54.38	29.00	1.125	12.00	2.000	33.61	
105.37	642.3	739.0	10180.0	11.9	15.8	13.8	54.88	28.75	1.125	14.00	1.750	33.33	
108.25	650.5	766.1	10509.9	11.9	16.2	13.7	56.38	29.00	1.125	13.00	2.000	33.61	
115.20	738.4	810.6	12510.3	12.7	16.9	15.4	60.00	31.50	1.250	15.00	1.500	40.47	
118.08	745.0	846.4	12828.0	12.7	17.2	15.2	61.50	31.50	1.250	16.00	1.500	40.47	
119.04	750.5	851.8	13016.8	12.8	17.3	15.3	62.00	31.75	1.250	14.00	1.750	40.78	
129.12	770.0	975.7	14040.1	12.9	18.2	14.4	67.25	31.75	1.250	17.00	1.750	40.78	
129.60	774.6	974.9	14190.5	12.9	18.3	14.6	67.50	32.00	1.250	15.00	2.000	41.09	
133.44	781.0	1021.9	14552.8	12.9	18.6	14.2	69.50	32.00	1.250	16.00	2.000	41.89	
144.25	894.1	1110.2	17643.7	13.8	19.7	15.9	75.13	34.75	1.375	17.00	1.750	48.98	
144.73	899.1	1109.7	17818.7	13.8	19.8	16.1	75.38	35.00	1.375	15.00	2.000	49.33	
148.57	907.1	1160.1	18262.0	13.9	20.1	15.7	77.38	35.00	1.375	16.00	2.000	49.33	
152.41	914.4	1210.7	18689.5	13.9	20.4	15.4	79.38	35.00	1.375	17.00	2.000	49.33	
157.44	1022.1	1208.4	21388.3	14.7	20.9	17.7	82.00	37.75	1.500	16.00	1.750	57.94	
160.80	1031.2	1255.6	21868.7	14.7	21.2	17.4	83.75	37.75	1.500	17.00	1.750	57.94	
161.28	1036.5	1255.3	22070.1	14.7	21.3	17.6	84.00	38.00	1.500	15.00	2.000	58.31	
165.12	1046.2	1309.4	22687.3	14.8	21.6	17.3	86.00	38.00	1.500	16.00	2.000	58.31	

0.8750 - 7/8 in.



1.000 IN. PLATE (AREA= 23.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL						THICK	WIDTH	FLANGE THICK	
3X 2X .125/ .188T	1.44	14.3	2.3	.6	.6	3.6	.75	3.19	.125	2.00	.188	.52
3X 2X .188/ .250T	2.04	17.3	3.0	.7	.6	3.6	1.06	3.25	.188	2.00	.250	.80
3X 2X .188/ .313T	2.28	19.4	3.4	.7	.6	3.7	1.19	3.31	.188	2.00	.313	.81
4X 2X .188/ .250T	2.40	26.2	3.8	.9	.7	4.6	1.25	4.25	.188	2.00	.250	.99
4X 2X .188/ .313T	2.65	29.1	4.4	.9	.7	4.6	1.38	4.31	.188	2.00	.313	1.00
3X 3X .188/ .313T	2.88	23.8	4.5	.8	.7	3.6	1.50	3.31	.188	3.00	.313	.81
4X 3X .188/ .313T	3.24	35.0	5.8	1.0	.8	4.6	1.69	4.31	.188	3.00	.313	1.00
3X 3X .250/ .375T	3.61	26.9	5.4	.9	.7	3.7	1.80	3.38	.250	3.00	.375	1.10
3X 3X .250/ .438T	3.96	29.1	6.0	.9	.8	3.7	2.06	3.44	.250	3.00	.438	1.11
4X 3X .250/ .375T	4.09	39.4	7.0	1.1	.8	4.6	2.13	4.38	.250	3.00	.375	1.35
5X 3X .250/ .313T	4.20	49.5	7.8	1.3	.9	5.5	2.19	5.31	.250	3.00	.313	1.58
4X 3X .250/ .438T	4.44	42.3	7.8	1.2	.8	4.6	2.31	4.44	.250	3.00	.438	1.36
5X 3X .250/ .375T	4.57	53.5	8.8	1.4	.9	5.5	2.38	5.38	.250	3.00	.375	1.60
6X 3X .250/ .313T	4.68	64.3	9.6	1.6	1.0	6.4	2.44	6.31	.250	3.00	.313	1.83
5X 3X .250/ .438T	4.92	57.2	9.8	1.4	.9	5.5	2.56	5.44	.250	3.00	.438	1.61
6X 3X .250/ .375T	5.05	68.9	10.8	1.6	1.0	6.4	2.63	6.38	.250	3.00	.375	1.85
6X 4X .250/ .438T	5.40	73.1	11.9	1.7	1.0	6.3	3.00	6.44	.250	3.00	.438	1.86
6X 4X .250/ .375T	5.76	76.1	13.2	1.8	1.1	6.3	3.25	6.44	.250	4.00	.438	1.86
7X 4X .313/ .500T	6.84	68.0	14.0	1.7	1.1	5.4	3.56	7.50	.313	4.00	.500	2.03
6X 4X .313/ .500T	7.08	94.5	16.7	1.9	1.1	6.3	3.69	7.38	.313	4.00	.500	2.62
6X 4X .313/ .500T	7.45	85.7	17.1	2.0	1.2	6.3	3.88	6.50	.313	4.00	.500	2.35
7X 4X .313/ .438T	7.56	99.3	18.5	2.1	1.3	7.1	3.94	7.44	.313	4.00	.438	2.64
6X 4X .313/ .563T	7.93	89.3	18.6	2.1	1.3	6.3	4.13	6.56	.313	4.00	.563	2.37
6X 5X .313/ .500T	8.04	103.7	20.3	2.3	1.4	7.1	4.19	7.50	.313	4.00	.500	2.66
6X 5X .313/ .500T	8.41	91.4	20.3	2.1	1.4	6.1	4.38	6.50	.313	5.00	.500	2.35
7X 4X .313/ .563T	8.52	107.9	22.1	2.4	1.5	7.1	4.44	7.56	.313	4.00	.563	2.68
7X 5X .313/ .500T	9.00	110.5	24.0	2.5	1.5	7.0	4.69	7.50	.313	5.00	.500	2.66
8X 4X .375/ .438T	9.12	118.3	23.0	2.6	1.5	7.9	4.75	8.44	.375	4.00	.438	3.54
9X 4X .375/ .500T	9.60	114.7	26.3	2.6	1.6	7.0	5.00	7.56	.375	5.00	.563	2.68
8X 4X .375/ .500T	9.85	137.0	26.8	2.9	1.7	8.7	5.13	9.44	.375	4.00	.438	3.92
8X 4X .375/ .563T	10.08	126.9	27.0	2.7	1.7	7.9	5.25	8.56	.375	4.00	.563	3.59
9X 4X .375/ .500T	10.33	141.8	29.0	3.0	1.8	8.7	5.38	9.50	.375	4.00	.500	3.94
8X 4X .375/ .625T	10.56	130.8	29.0	2.8	1.7	7.9	5.51	8.63	.375	4.00	.625	3.61
7X 6X .313/ .563T	10.68	120.1	30.3	2.7	1.7	6.8	5.56	7.56	.313	6.00	.563	2.68
9X 4X .375/ .563T	10.81	146.1	31.2	3.1	1.9	8.7	5.63	9.56	.375	4.00	.563	3.96
8X 5X .375/ .563T	11.16	134.2	31.7	2.9	1.8	7.7	5.81	8.56	.375	5.00	.563	3.59
9X 5X .375/ .500T	11.29	149.2	33.6	3.2	1.9	8.6	5.88	9.50	.375	5.00	.500	3.94
8X 5X .375/ .625T	11.77	138.1	34.2	3.0	1.9	7.7	6.13	8.63	.375	5.00	.625	3.61
9X 5X .375/ .563T	11.88	153.7	36.4	3.3	2.0	8.5	6.19	9.56	.375	5.00	.563	3.96
8X 6X .375/ .563T	12.25	140.1	36.4	3.1	2.0	7.6	6.38	8.56	.375	6.00	.563	3.59
9X 5X .375/ .625T	12.48	157.9	39.1	3.4	2.1	8.5	6.50	9.63	.375	5.00	.625	3.99
9X 6X .375/ .563T	12.96	160.0	41.5	3.4	2.2	8.4	6.75	9.56	.375	6.00	.563	3.96
10X 5X .438/ .500T	13.21	169.1	40.1	3.5	2.2	9.3	6.88	10.50	.438	5.00	.500	5.04

1.0000 - 1 in.

1.000 IN. PLATE (AREA= 23.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK			
9X 6X	.375/.625T	13.69	164.1	44.9	374.5	3.5	2.3	8.3	7.13	9.63	.375	6.00	.625		3.99	
10X 5X	.438/.563T	13.80	173.7	43.2	400.1	3.6	2.3	9.3	7.19	10.56	.438	5.00	.563		3.99	
10X 5X	.438/.625T	14.40	177.9	46.1	426.1	3.7	2.4	9.2	7.50	10.63	.438	5.00	.625		5.06	
8X 6X	.438/.688T	14.65	147.5	43.5	325.4	3.3	2.2	7.5	7.63	8.69	.438	6.00	.688		5.89	
9X 5X	.438/.750T	14.76	165.2	46.2	388.2	3.6	2.3	8.4	7.69	9.75	.438	5.00	.750		4.71	
10X 6X	.438/.563T	14.88	180.2	48.9	444.3	3.8	2.5	9.1	7.75	10.56	.438	6.00	.563		5.06	
10X 5X	.438/.688T	15.00	181.9	49.2	452.8	3.8	2.5	9.2	7.81	10.69	.438	5.00	.688		5.12	
10X 6X	.438/.625T	15.61	184.4	52.5	475.2	3.9	2.6	9.1	8.13	10.63	.438	6.00	.625		5.89	
9X 6X	.438/.750T	16.20	171.3	53.0	435.2	3.7	2.5	8.2	8.44	9.75	.438	6.00	.750		4.71	
10X 6X	.438/.688T	16.32	188.3	56.1	505.3	4.0	2.7	9.0	8.50	10.69	.438	6.00	.688		5.12	
9X 7X	.438/.688T	16.80	172.9	55.9	451.4	3.8	2.6	8.1	8.75	9.69	.438	7.00	.688		4.68	
12X 5X	.500/.750T	16.92	213.6	57.0	609.7	4.4	2.9	10.7	8.81	12.56	.500	5.00	.750		4.68	
10X 6X	.438/.750T	17.05	192.2	59.9	536.6	4.1	2.8	9.0	8.88	10.75	.438	6.00	.750		5.15	
12X 5X	.500/.625T	17.53	218.2	60.6	646.1	4.5	3.0	10.7	9.13	12.63	.500	5.00	.625		6.82	
10X 7X	.438/.688T	17.64	193.9	63.1	556.4	4.2	2.9	8.8	9.19	10.69	.438	7.00	.688		5.12	
12X 6X	.500/.563T	18.01	228.7	63.7	670.5	4.6	3.0	10.5	9.38	12.56	.500	6.00	.563		6.78	
12X 5X	.500/.688T	18.12	222.4	64.1	681.5	4.6	3.1	10.6	9.44	12.69	.500	5.00	.688		6.85	
10X 7X	.438/.750T	18.49	197.4	67.3	589.9	4.3	3.0	8.8	9.63	10.75	.438	7.00	.750		5.15	
12X 6X	.500/.625T	18.72	225.4	68.0	712.1	4.7	3.2	10.5	9.75	12.63	.500	6.00	.625		6.82	
9X 8X	.438/.750T	19.08	180.6	66.6	522.9	4.7	2.9	7.9	9.94	9.75	.438	8.00	.750		4.71	
12X 6X	.500/.688T	19.45	229.6	72.2	752.2	4.8	3.3	10.4	10.13	12.69	.500	6.00	.688		6.85	
12X 5X	.500/.875T	19.93	233.6	74.7	785.7	4.9	3.4	10.5	10.38	12.88	.500	5.00	.875		6.94	
12X 6X	.500/.750T	20.16	233.6	76.5	792.8	4.9	3.4	10.4	10.50	12.75	.500	6.00	.750		6.88	
12X 7X	.500/.688T	20.76	235.8	80.3	820.4	4.9	3.5	10.2	10.81	12.69	.500	7.00	.688		6.85	
12X 7X	.500/.750T	21.60	239.9	95.5	866.9	5.0	3.6	10.1	11.25	12.75	.500	7.00	.750		6.88	
14X 6X	.563/.625T	22.33	267.0	86.1	1017.5	5.4	3.8	11.8	11.63	14.63	.563	6.00	.625		8.80	
12X 8X	.500/.750T	23.04	245.0	94.3	936.6	5.2	3.8	9.9	12.00	12.75	.500	8.00	.750		6.88	
14X 6X	.563/.688T	23.84	271.5	90.9	1068.4	5.5	3.9	11.8	12.00	14.69	.563	6.00	.688		8.83	
12X 7X	.500/.875T	23.29	247.0	95.4	954.9	5.2	3.9	10.0	12.13	12.88	.500	7.00	.875		6.94	
14X 6X	.563/.750T	23.77	275.9	95.9	1120.6	5.6	4.1	11.7	12.38	14.75	.563	6.00	.750		8.87	
14X 7X	.563/.688T	24.36	278.4	100.4	1157.7	5.7	4.2	11.5	12.69	14.69	.563	7.00	.688		8.83	
12X 8X	.500/.875T	24.96	252.1	105.7	1033.8	5.4	4.1	9.8	13.00	12.88	.500	8.00	.875		6.94	
14X 7X	.563/.750T	25.21	282.7	106.1	1214.9	5.8	4.3	11.5	13.13	14.75	.563	7.00	.750		8.87	
12X 7X	.563/1.000T	26.40	253.4	107.5	1056.9	5.4	4.2	9.8	13.75	13.00	.563	7.00	1.000		7.88	
14X 8X	.563/.750T	26.65	288.6	116.3	1305.2	5.9	4.5	11.2	13.88	14.75	.563	8.00	.750		8.87	
14X 7X	.563/.875T	26.88	290.6	117.3	1327.2	6.0	4.6	11.3	14.00	14.88	.563	7.00	.875		8.94	
12X 8X	.563/1.000T	28.32	258.5	119.2	1142.3	5.5	4.4	9.6	14.75	13.00	.563	8.00	1.000		7.88	
14X 8X	.563/.875T	28.57	296.5	129.2	1429.2	6.1	4.8	11.1	14.88	14.88	.563	8.00	.875		8.94	
14X 9X	.563/.875T	30.24	301.5	141.0	1525.7	6.3	5.1	10.8	15.75	14.88	.563	9.00	.875		8.94	
14X 8X	.563/1.125T	30.49	303.4	142.3	1549.7	6.3	5.1	10.9	15.88	15.00	.563	8.00	1.125		9.01	
14X 7X	.625/1.125T	31.93	304.4	142.8	1567.6	6.3	5.1	11.0	16.63	15.13	.625	7.00	1.125		10.08	
12X 10X	.563/1.000T	32.16	266.4	142.3	1298.3	5.7	4.9	9.1	16.75	13.00	.563	10.00	1.000		7.88	
14X 9X	.563/1.000T	32.41	308.3	145.1	1655.0	6.4	5.4	10.6	16.88	15.00	.563	9.00	1.000		9.01	
12X 9X	.625/1.125T	33.85	268.6	145.1	1331.1	5.7	5.0	9.2	17.63	13.13	.625	9.00	1.125		8.83	
14X 8X	.625/1.125T	34.08	310.1	157.6	1685.6	6.4	5.4	10.7	17.75	15.13	.625	8.00	1.125		10.08	

1.0000 - 1 in.



1.000 IN. PLATE (AREA= 23.00 SQ.IN.)

SECTION MODULUS				***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	FLANGE	THICK	AREA
16X 7X .688/1.000T	34.56	343.8	158.7	1954.6	6.9	5.7	12.3	18.00	17.00	.688	7.00	1.000		.688	12.30
12X10X .625/1.125T	36.00	272.3	158.0	1412.7	5.8	5.2	8.9	18.75	13.13	.625	10.00	1.125		.625	8.83
16X 8X .688/1.000T	36.48	350.4	173.7	2090.2	7.1	6.0	12.0	19.00	17.00	.688	6.00	1.000		.688	12.30
16X 7X .688/1.250T	37.92	357.4	183.5	2213.0	7.2	6.2	12.1	19.75	17.25	.688	7.00	1.250		.688	12.56
16X 9X .688/1.000T	38.40	356.3	188.8	2221.4	7.2	6.2	11.8	20.00	17.00	.688	9.00	1.000		.688	12.38
18X 8X .750/ .875T	39.36	389.7	189.1	2531.2	7.6	6.5	13.4	20.50	18.88	.750	8.00	.875		.750	14.91
14X 9X .688/1.250T	40.09	321.6	189.5	1937.4	6.6	6.0	10.2	20.88	15.25	.688	9.00	1.250		.688	11.18
16X10X .688/1.000T	40.32	361.3	203.7	2344.9	7.3	6.5	11.5	21.00	17.00	.688	10.00	1.000		.688	12.30
16X 9X .688/1.125T	40.57	363.2	204.6	2372.6	7.3	6.5	11.6	21.13	17.13	.688	9.00	1.125		.688	12.47
18X 9X .750/ .875T	41.05	396.4	203.9	2676.7	7.8	6.8	13.1	21.38	18.88	.750	9.00	.875		.750	14.91
18X 8X .750/1.000T	41.28	398.4	205.0	2707.1	7.8	6.8	13.2	21.50	19.00	.750	8.00	1.000		.750	15.00
16X10X .688/1.125T	42.72	368.2	221.5	2507.1	7.4	6.8	11.3	22.25	17.13	.688	10.00	1.125		.688	12.47
16X11X .688/1.125T	44.89	372.5	238.1	2633.3	7.5	7.1	11.1	23.38	17.13	.688	11.00	1.125		.688	12.47
18X 9X .750/1.125T	45.37	412.9	239.6	3052.3	8.1	7.4	12.7	23.63	19.13	.750	9.00	1.125		.750	15.10
18X11X .750/1.000T	47.04	416.1	255.2	3163.7	8.2	7.6	12.4	24.50	19.00	.750	11.00	1.000		.750	15.00
18X 9X .750/1.250T	47.52	420.2	257.5	3233.0	8.2	7.7	12.6	24.75	19.25	.750	9.00	1.250		.750	15.19
18X11X .750/1.125T	49.69	423.8	276.6	3368.8	8.3	7.9	12.2	25.88	19.13	.750	11.00	1.125		.750	15.10
18X10X .750/1.250T	49.92	425.9	278.0	3405.9	8.3	8.0	12.3	26.00	19.25	.750	10.00	1.250		.750	15.19
18X12X .750/1.125T	51.84	428.4	295.1	3517.8	8.4	8.2	11.9	27.00	19.13	.750	12.00	1.125		.750	15.10
18X11X .750/1.250T	52.32	430.9	298.5	3571.3	8.4	8.3	12.0	27.25	19.25	.750	11.00	1.250		.750	15.19
21X 9X .875/1.125T	54.72	492.4	300.3	4314.3	9.2	8.8	14.4	28.50	22.13	.875	9.00	1.125		.875	20.24
18X 9X .875/1.500T	56.16	437.1	299.6	3644.3	8.4	8.3	12.2	29.25	19.50	.875	9.00	1.500		.875	17.94
21X10X .875/1.125T	56.89	499.5	321.5	4524.0	9.3	9.1	14.1	29.63	22.13	.875	10.00	1.125		.875	20.24
21X 9X .875/1.375T	59.04	508.8	340.1	4766.0	9.4	9.4	14.0	30.75	22.38	.875	9.00	1.375		.875	20.46
21X11X .875/1.125T	59.04	505.9	342.6	4724.4	9.4	9.3	13.8	30.75	22.13	.875	11.00	1.125		.875	20.24
21X12X .875/1.125T	61.21	511.7	364.0	4920.1	9.5	9.6	13.5	31.88	22.13	.875	12.00	1.125		.875	20.24
21X 9X .875/1.500T	61.21	516.1	359.9	4983.2	9.5	9.7	13.8	31.88	22.50	.875	9.00	1.500		.875	20.56
21X10X .875/1.375T	61.69	515.9	366.0	5005.8	9.5	9.7	13.7	32.13	22.38	.875	10.00	1.375		.875	20.46
21X10X .875/1.500T	64.09	523.3	388.2	5237.9	9.6	10.0	13.5	33.38	22.50	.875	10.00	1.500		.875	20.56
21X11X .875/1.375T	64.32	522.2	391.4	5230.9	9.6	10.0	13.4	33.50	22.38	.875	11.00	1.375		.875	20.46
21X11X .875/1.500T	66.97	529.5	415.7	5472.2	9.7	10.3	13.2	34.88	22.50	.875	11.00	1.500		.875	20.56
24X10X1.000/1.125T	67.68	587.0	393.7	6157.8	10.3	10.5	15.6	35.25	25.13	1.000	10.00	1.125		1.000	26.13
21X13X .875/1.375T	69.60	533.1	442.7	5654.3	9.8	10.6	12.8	36.25	22.38	.875	13.00	1.375		.875	20.46
24X11X1.000/1.125T	69.85	594.6	417.2	6406.7	10.4	10.8	15.4	36.38	25.13	1.000	11.00	1.125		1.000	26.13
21X12X .875/1.500T	69.85	535.2	443.7	5700.4	9.8	10.7	12.8	36.38	22.50	.875	12.00	1.500		.875	20.56
24X12X1.000/1.125T	72.00	601.7	440.9	6648.7	10.5	11.0	15.1	37.50	25.13	1.000	12.00	1.125		1.000	26.13
21X14X .875/1.375T	72.25	537.6	467.7	5847.6	9.8	10.9	12.5	37.63	22.38	.875	14.00	1.375		.875	20.46
24X10X1.000/1.375T	72.48	606.2	443.0	6752.2	10.5	11.1	15.2	37.75	25.38	1.000	10.00	1.375		1.000	26.38
21X13X .875/1.500T	72.73	540.1	471.0	5912.5	9.9	10.9	12.6	37.88	22.50	.875	13.00	1.500		.875	20.56
24X10X1.000/1.500T	74.88	614.9	467.5	7037.6	10.7	11.4	15.1	39.00	25.50	1.000	10.00	1.500		1.000	26.50
24X11X1.000/1.375T	75.13	614.0	471.5	7035.5	10.6	11.5	14.9	39.13	25.38	1.000	11.00	1.375		1.000	26.38
21X14X .875/1.500T	75.61	544.7	498.7	6117.6	9.9	11.2	12.3	39.38	22.50	.875	14.00	1.500		.875	20.56
24X11X1.000/1.500T	77.76	622.7	498.5	7337.1	10.7	11.8	14.7	40.50	25.50	1.000	11.00	1.500		1.000	26.50
21X15X .875/1.500T	78.49	548.7	525.9	6310.9	9.9	11.5	12.0	40.88	22.50	.875	15.00	1.500		.875	20.56
24X10X1.000/1.750T	79.68	630.9	516.1	7593.5	10.9	12.0	14.7	41.50	25.75	1.000	10.00	1.750		1.000	26.75

1.0000 - 1 in.

1.000 IN. PLATE (AREA= 23.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
24X13X1.000/1.375T	80.41	627.6	529.1	7573.4	10.8	12.1	14.3	41.88	25.38	1.000	13.00	1.375	26.38
24X13X1.000/1.500T	80.64	629.8	529.6	7623.1	10.6	12.1	14.4	42.00	25.50	1.000	12.00	1.500	26.50
21X16X .875/1.500T	81.37	552.5	553.4	6497.1	10.0	11.8	11.7	42.38	22.50	.875	16.00	1.500	20.56
24X13X1.000/1.750T	83.04	638.6	551.9	7919.5	10.9	12.4	14.3	43.25	25.75	1.000	11.00	1.750	26.75
24X13X1.000/1.375T	83.04	633.5	557.5	7822.8	10.9	12.3	14.0	43.25	25.38	1.000	14.00	1.375	26.38
24X13X1.000/1.500T	83.52	636.2	561.1	7901.0	10.9	12.4	14.1	43.50	25.50	1.000	13.00	1.500	26.50
24X13X1.000/1.375T	85.69	638.8	585.5	8059.1	10.9	12.6	13.8	44.63	25.38	1.000	15.00	1.375	26.38
24X13X1.000/1.750T	86.40	645.6	587.9	8230.7	11.0	12.7	14.0	45.00	25.75	1.000	12.00	1.750	26.75
24X13X1.000/1.500T	86.40	642.0	591.7	8159.6	11.0	12.7	13.8	45.00	25.50	1.000	14.00	1.500	26.50
24X13X1.000/1.500T	89.28	647.3	622.6	8409.9	11.0	13.0	13.5	46.50	25.50	1.000	15.00	1.500	26.50
24X13X1.000/1.750T	89.76	651.9	623.8	8526.9	11.1	13.1	13.7	46.50	25.75	1.000	13.00	1.750	26.75
27X13X1.125/1.375T	90.01	722.5	592.7	9566.2	11.7	13.2	16.1	46.88	28.38	1.125	12.00	1.375	33.05
27X13X1.125/1.375T	92.64	730.5	624.6	9892.7	11.8	13.5	15.8	48.25	28.38	1.125	13.00	1.375	33.05
27X13X1.125/1.500T	92.89	732.8	625.2	9952.3	11.8	13.6	15.9	48.38	28.50	1.125	12.00	1.500	33.19
24X13X1.000/1.750T	93.12	657.4	658.7	8801.9	11.1	13.4	13.4	48.50	25.75	1.000	14.00	1.750	26.75
27X13X1.125/1.375T	95.29	737.7	655.6	10198.1	11.8	13.8	15.6	49.68	28.38	1.125	14.00	1.375	33.85
27X13X1.125/1.500T	95.77	740.7	659.4	10291.2	11.9	13.9	15.6	49.68	28.50	1.125	13.00	1.500	33.19
24X13X1.000/1.750T	96.48	662.7	694.9	9073.6	11.1	13.7	13.1	50.25	25.75	1.000	15.00	1.750	26.75
27X13X1.125/1.750T	98.65	751.6	689.4	10697.3	12.0	14.2	15.5	51.38	28.75	1.125	12.00	1.750	33.47
27X13X1.125/1.500T	101.53	754.6	727.4	10926.0	12.0	14.5	15.8	52.88	28.58	1.125	15.00	1.500	33.19
27X13X1.125/1.750T	102.01	759.4	728.9	11064.6	12.1	14.6	15.2	53.33	28.75	1.125	13.00	1.750	33.47
27X13X1.125/2.000T	104.41	768.4	751.8	11400.7	12.1	14.8	15.2	54.38	29.00	1.125	12.00	2.000	33.75
27X13X1.125/1.750T	105.37	766.6	768.1	11414.0	12.1	14.9	14.9	54.88	28.75	1.125	14.00	1.750	33.47
27X13X1.125/2.000T	108.25	776.2	796.6	11794.2	12.2	15.2	14.8	56.38	29.00	1.125	13.00	2.000	33.75
30X13X1.250/1.500T	115.20	871.8	843.0	13928.4	13.0	16.0	16.5	60.00	31.50	1.250	15.00	1.500	40.63
30X13X1.250/1.500T	118.08	879.3	880.1	14295.4	13.0	16.3	16.2	61.50	31.50	1.250	16.00	1.500	40.63
30X13X1.250/1.750T	119.04	885.6	886.1	14506.1	13.1	16.4	16.4	62.00	31.75	1.250	14.00	1.750	40.94
30X13X1.250/1.750T	129.12	908.2	1014.6	15694.5	13.2	17.3	15.5	67.25	31.75	1.250	17.00	1.750	40.94
30X13X1.250/2.000T	129.60	913.4	1014.6	15860.8	13.2	17.4	15.6	67.50	32.00	1.250	15.00	2.000	41.25
30X13X1.250/2.000T	133.44	920.9	1063.2	16283.9	13.3	17.7	15.3	69.58	32.80	1.250	16.00	2.000	41.25
33X13X1.375/1.750T	144.25	1043.2	1154.8	19593.6	14.1	18.8	17.0	75.13	34.75	1.375	17.00	1.750	49.16
33X13X1.375/2.000T	144.73	1048.8	1154.8	19785.9	14.2	18.9	17.1	75.38	35.00	1.375	15.00	2.000	49.50
33X13X1.375/2.000T	145.57	1057.8	1207.0	20295.2	14.2	19.2	16.8	77.38	35.00	1.375	16.00	2.000	49.50
33X13X1.375/2.000T	152.41	1066.3	1259.6	20787.7	14.2	19.5	16.5	79.38	35.00	1.375	17.00	2.000	49.50
36X13X1.500/1.750T	157.44	1180.5	1257.2	23591.5	15.0	20.0	18.8	82.00	37.75	1.500	16.00	1.750	58.13
36X13X1.500/1.750T	160.80	1190.6	1306.0	24134.4	15.0	20.3	18.5	83.75	37.75	1.500	17.00	1.750	58.13
36X13X1.500/2.000T	161.28	1196.6	1306.1	24354.4	15.1	20.4	18.6	84.00	38.00	1.500	15.00	2.000	58.50
36X13X1.500/2.000T	165.12	1207.4	1362.2	24962.9	15.1	20.7	18.3	86.00	38.00	1.500	16.00	2.000	58.50

1.0000 - 1 in.



1.125 IN. PLATE (AREA= 29.11 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS			BEAM		FLANGE		SHEAR		
3X 2X	125/ .180T	WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	WIDTH	THICK	AREA
3X 2X	.125/ .180T	1.44	15.5	2.7	9.9	.6	.6	3.7	.75	3.19	.125	2.00	.180	.54
3X 2X	.180/ .250T	2.04	10.6	3.3	12.3	.6	.7	3.7	1.06	3.25	.180	2.00	.250	.82
3X 2X	.180/ .313T	2.28	20.8	3.8	14.1	.7	.7	3.7	1.19	3.31	.180	2.00	.313	.83
4X 2X	.180/ .250T	2.40	27.6	4.2	19.4	.8	.7	4.7	1.25	4.25	.180	2.00	.250	1.01
4X 2X	.180/ .313T	2.65	30.7	4.7	22.2	.9	.7	4.7	1.38	4.31	.180	2.00	.313	1.02
3X 3X	.180/ .313T	2.88	25.5	4.9	18.2	.8	.7	3.7	1.50	3.31	.180	3.00	.313	.83
4X 3X	.180/ .313T	3.24	37.2	6.1	28.6	1.0	.8	4.7	1.69	4.31	.180	3.00	.313	1.02
3X 3X	.250/ .375T	3.61	28.9	5.8	21.6	.8	.7	3.8	1.88	3.38	.250	3.00	.375	1.13
3X 3X	.250/ .438T	3.96	31.4	6.4	24.2	.9	.8	3.8	2.06	3.44	.250	3.00	.438	1.14
4X 3X	.250/ .375T	4.09	42.2	7.4	34.5	1.1	.8	4.7	2.13	4.38	.250	3.00	.375	1.38
5X 3X	.250/ .313T	4.20	53.1	8.1	45.4	1.2	.9	5.6	2.19	5.31	.250	3.00	.313	1.61
4X 3X	.250/ .438T	4.44	45.6	8.1	38.4	1.1	.8	4.7	2.31	4.44	.250	3.00	.438	1.39
5X 3X	.250/ .375T	4.57	57.6	9.1	51.3	1.3	.9	5.6	2.38	5.38	.250	3.00	.375	1.63
6X 3X	.250/ .313T	4.68	69.4	9.9	64.6	1.4	.9	6.5	2.44	6.31	.250	3.00	.313	1.86
5X 3X	.250/ .438T	4.92	61.9	10.1	57.1	1.3	.9	5.6	2.56	5.44	.250	3.00	.438	1.64
6X 3X	.250/ .375T	5.05	74.9	11.1	72.8	1.5	1.0	6.5	2.63	6.38	.250	3.00	.375	1.88
6X 3X	.250/ .438T	5.40	79.9	12.3	80.5	1.6	1.0	6.6	2.81	6.44	.250	3.00	.438	1.89
6X 4X	.250/ .375T	5.76	83.7	13.5	87.4	1.6	1.0	6.5	3.00	6.38	.250	4.00	.375	1.88
6X 4X	.250/ .438T	6.24	89.4	15.1	97.9	1.7	1.1	6.5	3.25	6.44	.250	4.00	.438	1.89
5X 4X	.313/ .500T	6.84	75.3	14.4	80.2	1.6	1.1	5.6	3.56	5.50	.313	4.00	.500	2.87
7X 4X	.313/ .375T	7.08	105.5	17.1	125.4	2.0	1.2	7.3	3.69	7.38	.313	4.00	.375	2.66
6X 4X	.313/ .500T	7.45	95.9	17.5	113.1	1.9	1.2	6.4	3.88	6.50	.313	4.00	.500	2.39
7X 4X	.313/ .438T	7.56	111.6	18.9	130.7	2.0	1.2	7.3	3.94	7.44	.313	4.00	.438	2.68
6X 4X	.313/ .563T	7.93	100.5	19.1	123.4	1.9	1.2	6.5	4.13	6.56	.313	4.00	.563	2.41
7X 4X	.313/ .500T	8.04	117.2	20.8	152.2	2.1	1.3	7.3	4.19	7.50	.313	4.00	.500	2.70
6X 5X	.313/ .500T	8.41	103.8	20.8	132.0	2.0	1.3	6.4	4.38	6.50	.313	5.00	.500	2.39
7X 4X	.313/ .563T	8.52	122.5	22.6	165.8	2.2	1.4	7.3	4.44	7.56	.313	4.00	.563	2.72
7X 5X	.313/ .500T	9.00	126.0	24.5	176.9	2.3	1.4	7.2	4.69	7.50	.313	5.00	.500	2.70
8X 4X	.375/ .563T	9.12	134.8	23.5	191.3	2.4	1.4	8.1	4.75	8.44	.375	4.00	.563	3.59
7X 5X	.313/ .563T	9.60	131.5	26.0	193.3	2.4	1.5	7.2	5.00	7.56	.313	5.00	.563	2.72
8X 4X	.375/ .500T	9.60	140.6	25.6	200.1	2.5	1.5	8.1	5.00	8.50	.375	4.00	.500	3.61
9X 4X	.375/ .438T	9.85	157.3	27.3	245.7	2.7	1.6	9.0	5.13	9.44	.375	4.00	.438	3.96
8X 4X	.375/ .563T	10.08	145.8	27.6	224.4	2.6	1.5	8.1	5.25	8.56	.375	4.00	.563	3.63
9X 4X	.375/ .500T	10.33	163.5	29.6	266.2	2.8	1.6	9.0	5.38	9.50	.375	4.00	.500	3.98
8X 4X	.375/ .625T	10.56	150.9	29.6	241.3	2.6	1.6	8.2	5.50	8.63	.375	4.00	.625	3.66
7X 6X	.313/ .563T	10.68	138.8	30.9	219.5	2.5	1.6	7.1	5.56	7.56	.313	6.00	.563	2.72
9X 4X	.375/ .563T	10.81	169.1	31.8	285.1	2.9	1.7	9.0	5.63	9.56	.375	4.00	.563	4.01
8X 5X	.375/ .563T	11.16	155.4	32.3	258.8	2.7	1.7	8.0	5.81	8.56	.375	5.00	.563	3.63
9X 5X	.375/ .500T	11.29	173.2	34.2	303.7	2.9	1.8	8.9	5.88	9.50	.375	5.00	.500	3.98
8X 5X	.375/ .625T	11.77	160.6	34.8	279.2	2.8	1.7	8.0	6.13	8.63	.375	5.00	.625	3.66
9X 5X	.375/ .563T	11.88	179.2	37.0	328.0	3.0	1.8	8.9	6.19	9.56	.375	5.00	.563	4.01
8X 6X	.375/ .563T	12.25	163.4	37.1	292.6	2.9	1.8	7.9	6.38	8.56	.375	6.00	.563	3.63
9X 5X	.375/ .625T	12.48	184.7	39.8	352.4	3.1	1.9	8.8	6.50	9.63	.375	5.00	.625	4.03
9X 6X	.375/ .563T	12.96	187.7	42.3	360.8	3.2	2.0	8.7	6.75	9.56	.375	6.00	.563	4.01
10X 5X	.438/ .500T	13.21	198.0	40.9	394.2	3.3	2.0	9.6	6.88	10.50	.438	5.00	.500	5.09

1.1250 - 1 1/8 in.

1.125 IN. PLATE (AREA= 29.11 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				DIMENSIONS				FLANGE		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	
9X 6X .375/.625T	13.69	193.2	45.7	397.2	3.3	2.1	8.7	7.13	9.63	6.00	.625	4.83
10X 5X .438/.563T	13.40	204.0	44.0	423.3	3.4	2.1	9.6	7.19	10.56	5.00	.563	5.12
10X 5X .438/.625T	14.40	209.5	47.0	451.3	3.5	2.2	9.6	7.50	10.63	5.00	.625	5.15
8X 6X .438/.600T	14.65	173.4	44.3	346.5	3.1	2.0	7.8	7.63	8.69	6.00	.600	4.30
9X 5X .438/.750T	14.76	194.7	47.1	412.4	3.3	2.1	8.8	7.69	9.75	5.00	.750	4.76
10X 6X .438/.563T	14.88	212.6	49.8	471.1	3.6	2.2	9.5	7.75	10.56	6.00	.563	5.12
10X 5X .438/.600T	15.00	214.7	50.1	480.2	3.6	2.2	9.6	7.81	10.69	5.00	.600	5.17
10X 6X .438/.625T	15.61	218.3	53.4	504.7	3.7	2.3	9.4	8.13	10.63	6.00	.625	5.15
9X 6X .438/.750T	16.20	203.1	54.0	463.9	3.5	2.3	8.6	8.44	9.75	6.00	.750	4.76
10X 6X .438/.600T	16.32	223.5	57.1	537.5	3.8	2.4	9.4	8.50	10.69	6.00	.600	5.17
9X 7X .438/.600T	16.80	205.3	56.9	481.9	3.6	2.3	8.5	8.75	9.69	7.00	.600	4.74
12X 5X .500/.563T	16.92	253.4	58.1	646.5	4.1	2.6	11.1	8.81	12.56	5.00	.563	6.84
10X 6X .438/.750T	17.05	228.6	61.0	571.8	3.9	2.5	9.4	8.88	10.75	6.00	.750	5.20
12X 5X .500/.625T	17.53	259.3	61.7	685.8	4.2	2.6	11.1	9.13	12.63	5.00	.625	6.80
10X 7X .438/.600T	17.64	231.1	64.2	593.6	3.9	2.6	9.2	9.19	10.69	7.00	.600	5.17
12X 6X .500/.563T	18.01	262.7	64.9	712.5	4.3	2.7	11.0	9.38	12.56	6.00	.563	6.84
12X 5X .500/.600T	18.12	264.8	65.4	724.3	4.3	2.7	11.1	9.44	12.69	5.00	.600	6.91
10X 7X .438/.750T	18.49	235.8	68.5	630.6	4.0	2.7	9.2	9.63	10.75	7.00	.750	5.20
12X 6X .500/.625T	18.72	268.8	69.3	757.8	4.4	2.8	10.9	9.75	12.63	6.00	.625	6.80
9X 8X .438/.750T	19.08	215.8	67.8	561.0	3.8	2.6	8.3	9.94	9.75	8.00	.750	4.76
12X 6X .500/.600T	19.45	274.3	73.6	801.7	4.5	2.9	10.9	10.13	12.69	6.00	.600	6.91
12X 5X .500/.875T	19.93	279.4	76.2	838.0	4.6	3.0	11.0	10.38	12.88	5.00	.875	7.00
10X 6X .500/.750T	20.16	279.6	78.0	846.1	4.6	3.0	10.8	10.50	12.75	6.00	.750	6.94
12X 7X .500/.600T	20.76	282.5	81.8	876.7	4.7	3.1	10.7	10.81	12.69	7.00	.600	6.91
12X 7X .500/.750T	21.60	288.0	87.1	927.9	4.8	3.2	10.7	11.25	12.75	7.00	.750	6.94
14X 6X .563/.625T	22.33	319.8	87.9	1085.8	5.2	3.4	12.4	11.63	14.63	6.00	.625	8.87
12X 8X .500/.750T	23.04	294.9	96.1	1005.4	4.9	3.4	10.5	12.00	12.75	8.00	.750	6.94
14X 6X .563/.600T	23.84	325.7	92.7	1141.7	5.3	3.5	12.3	12.00	14.69	6.00	.600	8.90
12X 7X .500/.875T	23.29	297.4	97.1	1025.5	5.0	3.4	10.6	12.13	12.88	7.00	.875	7.00
14X 6X .563/.750T	23.77	331.3	97.8	1198.9	5.4	3.6	12.3	12.38	14.75	6.00	.750	8.94
14X 7X .563/.600T	24.36	334.7	102.4	1240.1	5.4	3.7	12.1	12.69	14.69	7.00	.600	8.90
12X 8X .500/.875T	24.96	304.4	107.7	1113.9	5.1	3.7	10.3	13.00	12.88	8.00	.875	7.00
14X 7X .563/.750T	25.21	340.2	108.2	1303.3	5.6	3.8	12.0	13.13	14.75	7.00	.750	8.94
12X 7X .563/1.000T	26.40	305.7	109.7	1140.1	5.2	3.7	10.4	13.75	13.00	7.00	1.000	7.95
14X 8X .563/.750T	26.65	348.0	118.6	1403.8	5.7	4.0	11.8	13.88	14.75	8.00	.750	8.94
14X 7X .563/.875T	26.88	350.5	119.7	1427.9	5.8	4.1	11.9	14.00	14.88	7.00	.875	9.01
12X 8X .563/1.000T	28.32	312.5	121.6	1236.5	5.3	4.0	10.2	14.75	13.00	8.00	1.000	7.95
14X 8X .563/.875T	28.57	358.3	131.8	1542.2	5.9	4.3	11.7	14.88	14.88	8.00	.875	9.01
14X 9X .563/.875T	30.24	365.0	143.8	1651.0	6.1	4.5	11.5	15.75	14.88	9.00	.875	9.01
14X 8X .563/1.000T	30.49	367.4	145.1	1677.4	6.1	4.6	11.6	15.88	15.00	8.00	1.000	9.08
14X 7X .625/1.125T	31.93	368.0	145.9	1697.9	6.1	4.6	11.6	16.63	15.13	7.00	1.125	10.16
12X 10X .563/1.000T	32.16	323.2	145.1	1414.6	5.6	4.4	9.7	16.75	13.00	10.00	1.000	7.95
14X 9X .563/1.000T	32.41	373.9	158.8	1797.1	6.3	4.8	11.3	16.88	15.00	.563	1.000	9.08
12X 9X .625/1.125T	33.85	325.5	148.2	1451.9	5.6	4.5	9.8	17.63	13.13	9.00	1.125	8.91
14X 8X .625/1.125T	34.08	375.5	161.0	1831.8	6.3	4.9	11.4	17.75	15.13	8.00	1.125	10.16

1.1250 - 1 1/8 in.



\*\*\*\*\* BEAM DIMENSIONS \*\*\*\*\*

1.1250 - 1 1/8 in.

1.125 IN. PLATE (AREA= 29.11 SQ.IN.)

NOMINAL SIZE	WT./FT	SECTION MODULUS			INERTIA	R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****		SHEAR AREA
		ZPL	ZFL	INERTIA							ME3	FLANGE	
											THICK	WIDTH	THICK
24X13X1.000/1.375T	80.41	748.4	545.2	8360.2	10.9	11.2	15.3	41.88	25.38	1.000	13.00	1.375	26.51
24X12X1.000/1.500T	80.64	750.8	545.8	8415.0	10.9	11.2	15.4	42.00	25.50	1.000	12.00	1.500	26.63
21X16X.875/1.500T	81.37	684.8	569.1	7244.1	10.1	10.9	12.7	42.38	22.50	.875	16.00	1.500	20.67
24X11X1.000/1.750T	83.04	761.4	569.1	8752.6	11.0	11.5	15.4	43.25	25.75	1.000	11.00	1.750	26.88
24X14X1.000/1.375T	83.04	755.5	574.4	8648.8	10.9	11.4	15.1	43.25	25.38	1.000	14.00	1.375	26.51
24X13X1.000/1.500T	83.52	758.7	578.2	8736.8	11.0	11.5	15.1	43.50	25.50	1.000	13.00	1.500	26.63
24X15X1.000/1.375T	85.63	761.9	603.2	8923.3	11.0	11.7	14.8	44.63	25.38	1.000	15.00	1.375	26.51
24X12X1.000/1.750T	86.40	769.8	606.2	9113.9	11.1	11.8	15.0	45.00	25.75	1.000	12.00	1.750	26.88
24X14X1.000/1.500T	86.40	765.6	609.7	9037.3	11.0	11.8	14.8	45.00	25.50	1.000	14.00	1.500	26.63
24X15X1.000/1.500T	89.20	772.1	641.5	9329.1	11.1	12.1	14.5	46.50	25.50	1.000	15.00	1.500	26.63
24X13X1.000/1.750T	89.76	777.4	643.2	9459.3	11.2	12.2	14.7	46.75	25.75	1.000	13.00	1.750	26.88
27X12X1.125/1.375T	90.01	854.3	612.2	10521.9	11.8	12.3	17.2	46.88	28.38	1.125	12.00	1.375	33.19
27X13X1.125/1.375T	92.64	863.7	645.0	10894.8	11.9	12.6	16.9	48.25	28.38	1.125	13.00	1.375	33.19
27X12X1.125/1.500T	92.89	866.3	645.7	10960.4	11.9	12.7	17.0	48.38	28.50	1.125	12.00	1.500	33.33
24X14X1.000/1.750T	93.12	784.1	679.3	9781.3	11.2	12.5	14.4	48.50	25.75	1.000	14.00	1.750	26.88
27X14X1.125/1.375T	95.29	872.2	676.9	11244.6	12.0	12.9	16.6	49.63	28.38	1.125	14.00	1.375	33.19
27X13X1.125/1.500T	95.77	875.7	681.0	11348.6	12.0	13.0	16.7	49.68	28.50	1.125	13.00	1.500	33.33
24X15X1.000/1.750T	96.48	790.4	716.5	10100.4	11.3	12.8	14.1	50.25	25.75	1.000	15.00	1.750	26.88
27X12X1.125/1.750T	98.65	888.4	712.2	11809.4	12.1	13.3	16.6	51.38	28.75	1.125	12.00	1.750	33.61
27X15X1.125/1.500T	101.53	892.1	751.0	12079.3	12.1	13.5	16.1	52.08	28.50	1.125	15.00	1.500	33.33
27X13X1.125/1.750T	102.01	897.7	752.9	12232.7	12.2	13.6	16.2	53.13	28.75	1.125	13.00	1.750	33.61
27X14X1.125/1.750T	104.41	908.1	777.0	12614.0	12.3	13.9	16.2	54.38	29.00	1.125	12.00	2.000	33.89
27X12X1.125/2.000T	105.37	906.1	793.3	12636.7	12.3	13.9	15.9	54.68	28.75	1.125	14.00	1.750	33.61
27X13X1.125/2.000T	108.25	917.3	823.2	13070.1	12.4	14.2	15.9	56.38	29.00	1.125	13.00	2.000	33.89
30X15X1.250/1.500T	115.20	1021.6	871.7	15345.2	13.1	15.0	17.6	60.00	31.50	1.250	15.00	1.500	40.78
30X16X1.250/1.500T	118.08	1030.4	909.9	15764.7	13.2	15.3	17.3	61.50	31.75	1.250	16.00	1.500	40.78
30X14X1.250/1.750T	119.04	1037.5	916.5	15998.5	13.3	15.4	17.5	62.00	31.75	1.250	14.00	1.750	41.09
30X17X1.250/1.750T	129.12	1063.8	1049.1	17364.2	13.4	16.3	16.6	67.25	31.75	1.250	17.00	1.750	41.09
30X15X1.250/2.000T	129.60	1069.7	1049.4	17547.1	13.5	16.4	16.7	67.50	32.00	1.250	15.00	2.000	41.41
33X17X1.375/1.750T	144.25	1211.1	1135.2	21580.0	14.4	17.8	18.1	75.13	34.75	1.375	17.00	1.750	49.33
33X15X1.375/2.000T	144.73	1217.3	1195.6	21790.4	14.4	17.9	18.2	75.38	35.00	1.375	15.00	2.000	49.67
33X16X1.375/2.000T	148.57	1227.7	1249.6	22371.3	14.5	18.2	17.9	77.38	35.00	1.375	16.00	2.000	49.67
33X17X1.375/2.000T	152.41	1237.4	1303.8	22934.5	14.5	18.5	17.6	79.38	35.00	1.375	17.00	2.000	49.67
36X16X1.500/1.750T	157.44	1359.0	1302.2	25851.7	15.3	19.0	19.9	82.00	37.75	1.500	16.00	1.750	58.31
36X17X1.500/1.750T	160.80	1370.5	1352.5	26462.4	15.3	19.3	19.6	83.75	37.75	1.500	17.00	1.750	58.31
36X15X1.500/2.000T	161.28	1377.1	1353.1	26702.1	15.4	19.4	19.7	84.00	38.00	1.500	15.00	2.000	58.69
36X16X1.500/2.000T	165.12	1389.4	1410.9	27388.3	15.4	19.7	19.4	86.00	38.00	1.500	16.00	2.000	58.69

1.1250 - 1 1/8 in.



1.250 IN. PLATE (AREA= 35.94 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				R	VP	VF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		WT/FT	ZPL	ZFL	INERTIA						THICK	WIDTH	THICK	
3X 2X .125/ .188		1.44	17.2	3.1	11.8	.6	.7	3.8	.75	3.19	.125	2.00	.188	.56
3X 2X .188/ .250		2.04	20.3	3.8	14.3	.6	.7	3.8	1.06	3.25	.188	2.00	.250	.85
3X 2X .188/ .313		2.28	22.5	4.2	16.2	.7	.7	3.8	1.19	3.31	.188	2.00	.313	.86
4X 2X .188/ .250		2.40	29.2	4.6	21.7	.8	.7	4.8	1.25	4.25	.188	2.00	.250	1.03
4X 2X .188/ .313		2.65	32.4	5.1	24.6	.8	.8	4.8	1.38	4.31	.188	2.00	.313	1.05
3X 3X .188/ .313		2.88	27.3	5.4	20.5	.7	.8	3.8	1.50	3.31	.188	3.00	.313	.86
4X 3X .188/ .313		3.24	39.2	6.5	31.2	.9	.8	4.8	1.69	4.31	.188	3.00	.313	1.05
3X 3X .250/ .375		3.61	30.9	6.3	24.1	.8	.8	3.8	1.88	3.38	.250	3.00	.375	1.16
3X 3X .250/ .438		3.96	33.6	6.9	26.8	.8	.8	3.9	2.06	3.44	.250	3.00	.438	1.17
4X 3X .250/ .375		4.09	44.7	7.8	37.4	1.0	.8	4.8	2.13	4.38	.250	3.00	.375	1.41
5X 3X .250/ .313		4.20	55.9	8.5	48.6	1.1	.9	5.7	2.19	5.31	.250	3.00	.313	1.64
4X 3X .250/ .438		4.44	48.3	8.6	41.5	1.0	.9	4.8	2.31	4.44	.250	3.00	.438	1.42
5X 3X .250/ .375		4.57	60.9	9.5	54.7	1.2	.9	5.7	2.38	5.38	.250	3.00	.375	1.66
6X 3X .250/ .313		4.68	73.4	10.3	68.4	1.3	.9	6.6	2.44	6.31	.250	3.00	.313	1.89
5X 3X .250/ .438		4.92	65.7	10.5	60.8	1.3	.9	5.8	2.56	5.44	.250	3.00	.438	1.67
6X 3X .250/ .375		5.05	79.6	11.5	76.8	1.4	1.0	6.7	2.63	6.38	.250	3.00	.375	1.91
6X 3X .250/ .438		5.40	85.2	12.7	84.9	1.5	1.0	6.7	2.81	6.44	.250	3.00	.438	1.92
6X 4X .250/ .375		5.76	89.7	13.9	92.1	1.5	1.0	6.6	3.00	6.38	.250	4.00	.375	1.91
6X 4X .250/ .438		6.24	96.4	15.6	103.0	1.6	1.1	6.6	3.25	6.44	.250	4.00	.438	1.92
5X 4X .313/ .500		6.84	81.4	14.9	85.1	1.5	1.0	5.7	3.56	5.50	.313	4.00	.500	2.11
7X 4X .313/ .375		7.08	114.5	17.6	131.6	1.8	1.1	7.5	3.69	7.38	.313	4.00	.375	2.70
6X 4X .313/ .500		7.45	104.3	18.0	119.1	1.7	1.1	6.6	3.88	6.50	.313	4.00	.500	2.43
7X 4X .313/ .438		7.56	121.7	19.4	142.5	1.9	1.2	7.5	3.94	7.44	.313	4.00	.438	2.72
6X 4X .313/ .563		7.93	109.9	19.6	130.0	1.8	1.2	6.6	4.13	6.56	.313	4.00	.563	2.44
7X 4X .313/ .500		8.04	128.5	21.3	159.7	2.0	1.2	7.5	4.19	7.50	.313	4.00	.500	2.74
6X 5X .313/ .500		8.41	114.0	21.3	139.1	1.9	1.2	6.5	4.38	6.50	.313	5.00	.500	2.43
7X 5X .313/ .563		8.52	134.9	23.1	178.0	2.1	1.3	7.5	4.44	7.56	.313	5.00	.563	2.76
8X 4X .375/ .500		9.00	139.4	25.0	185.7	2.1	1.3	7.4	4.69	7.50	.313	5.00	.500	2.74
8X 4X .375/ .563		9.60	146.2	27.4	203.0	2.2	1.4	7.4	5.00	7.56	.313	5.00	.563	2.76
8X 4X .375/ .500		9.60	156.0	26.1	218.0	2.3	1.4	8.4	5.00	8.50	.375	4.00	.500	3.66
9X 4X .375/ .438		9.85	175.1	27.8	256.8	2.5	1.5	9.2	5.13	9.44	.375	4.00	.438	4.01
8X 4X .375/ .563		10.08	162.4	28.1	235.1	2.4	1.4	8.4	5.25	8.56	.375	4.00	.563	3.68
9X 4X .375/ .500		10.33	182.8	30.2	278.9	2.6	1.5	9.2	5.38	9.50	.375	4.00	.500	4.03
8X 4X .375/ .625		10.56	168.7	30.2	252.9	2.5	1.5	8.4	5.50	8.63	.375	4.00	.625	3.71
7X 6X .313/ .563		10.68	155.5	31.5	230.8	2.4	1.5	7.3	5.56	7.56	.313	6.00	.563	2.76
8X 5X .375/ .563		11.16	174.4	32.9	271.6	2.6	1.6	9.2	5.63	9.56	.375	5.00	.563	4.05
9X 5X .375/ .500		11.29	195.0	34.9	317.9	2.8	1.6	9.1	5.88	9.50	.375	5.00	.500	4.03
8X 5X .375/ .625		11.77	181.0	35.5	293.2	2.6	1.6	8.3	6.13	8.63	.375	5.00	.625	3.71
9X 5X .375/ .563		11.88	202.5	37.7	343.6	2.9	1.7	9.1	6.19	9.56	.375	5.00	.563	4.05
8X 6X .375/ .563		12.25	184.7	37.7	307.5	2.7	1.7	8.1	6.38	8.56	.375	6.00	.563	3.68
9X 5X .375/ .625		12.48	209.5	40.5	369.5	3.0	1.8	9.1	6.50	9.63	.375	5.00	.625	4.08
9X 6X .375/ .563		12.96	213.4	43.0	387.0	3.0	1.8	9.0	6.75	9.56	.375	6.00	.563	4.05
10X 5X .438/ .500		13.21	224.9	41.7	412.9	3.1	1.8	9.9	6.88	10.50	.438	5.00	.500	5.15

1.2500 - 1 1/4 in.

SECTION MODULUS

SECTION MODULUS													BEAM DIMENSIONS													SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	R	YP	VF	AREA	DEPTH	THICK	WEB	FLANGE	THICK	WIDTH	THICK	AREA											
11.63	220.5	46.4	417.3	3.1	1.9	9.0	7.13	9.63	.375				6.00	.625	4.08											
11.80	232.6	44.8	443.7	3.2	1.9	9.9	7.19	10.56	.438				5.00	.563	5.17											
14.40	239.5	47.8	473.6	3.3	2.0	9.9	7.50	10.63	.438				5.00	.625	5.20											
14.65	197.9	45.2	365.5	2.9	1.8	8.1	7.63	8.69	.438				6.00	.688	4.35											
14.76	222.7	47.9	433.9	3.2	1.9	9.1	7.69	9.75	.438				5.00	.750	4.82											
14.88	243.6	50.6	494.8	3.4	2.0	9.9	7.75	10.56	.438				6.00	.563	5.17											
15.00	246.2	51.0	504.3	3.4	2.0	9.9	7.81	10.69	.438				5.00	.688	5.23											
15.61	250.9	54.3	530.6	3.5	2.1	9.8	8.13	10.63	.438				6.00	.625	5.20											
16.20	233.6	54.9	489.3	3.3	2.1	8.9	8.44	9.75	.438				6.00	.750	4.82											
16.32	257.6	58.1	565.8	3.6	2.2	9.7	8.50	10.69	.438				6.00	.688	5.23											
16.80	236.7	57.9	508.7	3.4	2.1	8.8	8.75	9.69	.438				7.00	.688	4.79											
16.92	292.1	59.1	678.6	3.9	2.3	11.5	8.81	12.56	.500				5.00	.563	6.91											
17.05	264.2	62.0	602.5	3.7	2.3	9.7	8.88	10.75	.438				6.00	.750	5.26											
17.53	299.6	62.8	720.6	4.0	2.4	11.5	9.13	12.63	.500				5.00	.625	6.94											
17.64	267.5	65.2	626.3	3.7	2.3	9.6	9.19	10.69	.438				7.00	.688	5.23											
18.01	304.1	66.0	749.2	4.1	2.5	11.3	9.38	12.56	.500				6.00	.563	6.91											
18.12	306.6	66.5	761.6	4.1	2.5	11.5	9.44	12.69	.500				5.00	.688	6.97											
18.49	273.8	69.6	666.1	3.8	2.4	9.6	9.63	10.75	.438				7.00	.750	5.26											
18.72	311.9	70.4	737.6	4.2	2.6	11.3	9.75	12.63	.500				6.00	.625	6.94											
19.08	250.6	68.9	594.5	3.6	2.4	8.6	9.94	9.75	.438				8.00	.750	4.82											
19.45	318.9	74.8	844.8	4.3	2.6	11.3	10.13	12.69	.500				6.00	.688	6.97											
19.93	325.2	77.4	883.6	4.4	2.7	11.4	10.38	12.88	.500				5.00	.875	7.07											
20.16	325.7	79.3	892.5	4.4	2.7	11.3	10.50	12.75	.500				6.00	.750	7.00											
20.76	329.5	83.2	925.7	4.5	2.8	11.1	10.81	12.69	.500				7.00	.688	6.97											
21.60	336.6	88.5	981.1	4.6	2.9	11.1	11.25	12.75	.500				7.00	.750	7.00											
22.33	373.5	89.4	1145.3	4.9	3.1	12.8	11.63	14.63	.563				6.00	.625	8.94											
23.04	345.7	97.6	1065.5	4.7	3.1	10.9	12.00	12.75	.500				8.00	.750	7.00											
23.04	380.9	94.4	1205.4	5.0	3.2	12.8	12.00	14.69	.563				6.00	.688	8.97											
23.29	348.7	98.7	1087.0	4.8	3.1	11.0	12.13	12.88	.500				7.00	.875	7.07											
23.77	388.0	99.5	1267.1	5.1	3.3	12.7	12.38	14.75	.563				6.00	.750	9.01											
24.36	392.4	104.1	1311.9	5.2	3.3	12.6	12.69	14.69	.563				7.00	.688	8.97											
24.96	358.0	109.4	1183.9	4.9	3.3	10.8	13.00	12.88	.500				8.00	.875	7.07											
25.21	399.5	110.0	1380.3	5.3	3.5	12.5	13.13	14.75	.563				7.00	.750	9.01											
26.40	359.5	111.5	1213.1	4.9	3.4	10.9	13.75	13.00	.563				7.00	1.000	8.82											
26.65	409.5	120.5	1489.9	5.5	3.6	12.4	13.88	14.75	.563				8.00	.750	9.01											
26.88	412.6	121.7	1515.8	5.5	3.7	12.5	14.00	14.88	.563				7.00	.875	9.08											
28.32	368.5	123.7	1319.4	5.1	3.6	10.7	14.75	13.00	.563				8.00	1.000	8.82											
28.57	422.7	134.0	1641.2	5.7	3.9	12.2	14.88	14.88	.563				8.00	.875	9.08											
30.24	431.4	146.2	1761.0	5.8	4.1	12.0	15.75	14.88	.563				9.00	.875	9.08											
30.49	434.4	147.5	1789.7	5.9	4.1	12.1	15.88	15.00	.563				8.00	1.000	9.15											
31.93	434.8	148.5	1812.9	5.9	4.2	12.2	16.63	15.13	.625				7.00	1.125	10.24											
32.16	382.8	147.5	1517.6	5.4	4.0	10.3	16.75	13.00	.563				10.00	1.000	8.82											
32.41	442.9	161.4	1922.4	6.0	4.3	11.9	16.88	15.00	.563				9.00	1.000	9.15											
33.85	385.4	150.9	1559.3	5.4	4.0	10.3	17.63	13.13	.625				9.00	1.125	8.99											
34.08	444.5	163.9	1961.3	6.0	4.4	12.0	17.75	15.13	.625				8.00	1.125	10.24											

1.2500 - 1 1/4 in.



1.250 IN. PLATE (AREA= 35.94 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL						THICK	WIDTH	FLANGE THICK	
16X 7X .688/1.000T	34.56	489.9	165.5	6.5	4.6	13.6	10.00	17.00	.688	7.00	1.000	12.56
12X10X .625/1.125T	36.00	392.0	164.3	5.5	4.2	10.1	10.75	13.13	.625	10.00	1.125	8.99
16X 8X .688/1.000T	36.48	500.6	181.0	6.6	4.8	13.4	19.00	17.00	.688	8.00	1.000	12.56
16X 7X .688/1.250T	37.92	511.4	191.4	6.8	5.0	13.5	19.75	17.25	.688	7.00	1.250	12.73
16X 9X .688/1.000T	38.40	510.2	196.7	6.8	5.1	13.2	20.00	17.00	.688	9.00	1.000	12.56
18X 8X .750/ .875T	39.36	554.5	137.7	7.2	5.3	14.8	20.50	18.88	.750	8.00	.875	15.10
14X 9X .688/1.250T	40.09	462.5	197.5	6.3	4.9	11.6	20.88	15.25	.688	9.00	1.250	11.35
16X10X .688/1.000T	40.32	518.5	212.2	6.9	5.3	13.0	21.00	17.00	.688	10.00	1.000	12.56
16X 9X .688/1.125T	40.57	521.2	213.3	7.0	5.3	13.0	21.13	17.13	.688	9.00	1.125	12.65
18X 9X .750/ .875T	41.05	565.0	213.1	7.4	5.5	14.6	21.38	18.88	.750	9.00	.875	15.10
18X 8X .750/1.000T	41.28	567.9	214.4	7.4	5.5	14.7	21.50	19.00	.750	8.00	1.000	15.19
16X10X .688/1.125T	42.72	529.6	230.8	7.1	5.6	12.8	22.25	17.13	.688	10.00	1.125	12.65
16X11X .688/1.125T	44.89	536.8	248.1	7.3	5.8	12.6	23.38	17.13	.688	11.00	1.125	12.65
18X 9X .750/1.125T	45.37	590.6	250.5	7.8	6.1	14.3	23.63	19.13	.750	9.00	1.125	15.29
18X11X .750/1.000T	47.04	596.0	266.6	7.9	6.3	14.0	24.50	19.00	.750	11.00	1.000	15.19
18X 9X .750/1.250T	47.52	601.9	269.3	7.9	6.3	14.2	24.75	19.25	.750	9.00	1.250	15.38
18X10X .750/1.250T	49.69	607.9	289.1	8.0	6.6	13.8	25.88	19.13	.750	11.00	1.125	15.29
18X11X .750/1.250T	49.92	610.9	290.7	8.1	6.6	13.9	26.00	19.25	.750	10.00	1.250	15.38
18X12X .750/1.125T	51.84	615.3	308.4	8.2	6.8	13.6	27.00	19.13	.750	12.00	1.125	15.29
18X11X .750/1.250T	52.32	619.0	312.1	8.2	6.9	13.6	27.25	19.25	.750	11.00	1.250	15.38
21X 9X .875/1.125T	54.72	697.8	315.8	8.9	7.3	16.1	28.50	22.13	.875	9.00	1.125	20.46
18X 9X .875/1.500T	56.16	623.4	314.8	8.2	7.0	13.8	29.25	19.50	.875	9.00	1.500	18.16
21X10X .875/1.125T	56.89	708.5	337.9	9.2	7.6	15.8	29.63	22.13	.875	10.00	1.125	20.46
21X 9X .875/1.375T	59.04	722.0	357.8	9.2	7.8	15.8	30.75	22.38	.875	9.00	1.375	20.68
21X11X .875/1.125T	59.04	718.1	360.0	9.2	7.8	15.6	30.75	22.13	.875	11.00	1.125	20.46
21X12X .875/1.125T	61.21	727.0	382.4	9.3	8.1	15.3	31.88	22.13	.875	12.00	1.125	20.46
21X 9X .875/1.500T	61.21	732.8	378.7	9.4	8.1	15.7	31.88	22.50	.875	9.00	1.500	20.78
21X10X .875/1.375T	61.69	732.8	384.9	9.4	8.1	15.5	32.13	22.38	.875	10.00	1.375	20.68
21X11X .875/1.500T	64.09	743.7	408.4	9.5	8.4	15.3	33.38	22.50	.875	10.00	1.500	20.78
21X12X .875/1.375T	64.32	742.3	411.6	9.5	8.4	15.2	33.50	22.38	.875	11.00	1.375	20.68
21X11X .875/1.500T	66.97	753.1	437.3	9.6	8.7	15.0	34.88	22.50	.875	11.00	1.500	20.78
24X10X1.000/1.125T	67.68	822.7	416.2	10.1	8.9	17.5	35.25	25.13	1.000	10.00	1.125	26.38
21X13X .875/1.375T	69.60	758.8	465.4	9.7	9.0	14.6	36.25	25.13	.875	13.00	1.375	20.68
24X11X1.000/1.125T	69.85	833.7	440.8	10.3	9.1	17.3	36.38	25.13	1.000	11.00	1.125	26.38
21X12X .875/1.500T	69.85	761.7	466.7	9.7	9.0	14.7	36.38	22.50	.875	12.00	1.500	20.78
24X12X1.000/1.125T	72.00	843.9	465.6	10.4	9.4	17.0	37.50	25.13	1.000	12.00	1.125	26.38
21X14X .875/1.375T	72.25	765.7	491.8	9.8	9.2	14.4	37.63	22.38	.875	14.00	1.375	20.68
24X10X1.000/1.375T	72.48	850.1	468.3	10.4	9.5	17.2	37.75	25.38	1.000	10.00	1.375	26.63
21X13X .875/1.500T	72.73	769.2	495.5	9.8	9.3	14.4	37.88	22.50	.875	13.00	1.500	20.78
24X10X1.000/1.500T	74.88	862.4	494.2	10.6	9.7	17.0	39.00	25.50	1.000	10.00	1.500	26.75
24X11X1.000/1.375T	75.13	861.3	498.3	10.6	9.8	16.9	39.13	25.38	1.000	11.00	1.375	26.63
21X14X .875/1.500T	75.61	776.2	524.6	9.9	9.6	14.2	39.38	22.50	.875	14.00	1.500	20.78
24X11X1.000/1.500T	77.76	873.6	526.9	10.7	10.1	16.7	40.50	25.50	1.000	11.00	1.500	26.75
21X15X .875/1.500T	78.49	782.4	553.4	10.0	9.8	13.9	40.88	22.50	.875	15.00	1.500	20.78
24X10X1.000/1.750T	79.68	885.1	546.0	10.9	10.3	16.7	41.50	25.75	1.000	10.00	1.750	27.00

1.2500 - 1 1/4 in.

1.250 IN. PLATE (AREA= 35.94 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
		ZPL	ZFL	INERTIA						THICK	WIDTH	FLANGE THICK	
2X13X1.000/1.375T	80.41	881.0	558.9	9106.4	10.8	10.3	16.3	41.88	25.38	1.000	13.00	1.375	26.63
2X12X1.000/1.500T	80.64	883.8	559.6	9166.2	10.8	10.4	16.4	42.00	25.50	1.000	12.00	1.500	26.75
2X16X1.000/1.500T	81.37	788.1	582.4	7953.8	10.1	10.1	13.7	42.38	22.50	.875	16.00	1.500	20.78
2X11X1.000/1.750T	83.04	896.3	583.8	9454.1	11.0	10.6	16.0	43.25	25.75	1.000	11.00	1.750	27.00
2X14X1.000/1.375T	83.04	889.5	588.8	9434.6	10.9	10.6	16.0	43.25	25.38	1.000	14.00	1.375	26.63
2X13X1.000/1.500T	83.52	893.3	592.8	9532.2	11.0	10.7	16.1	43.50	25.50	1.000	13.00	1.500	26.75
2X15X1.000/1.375T	85.69	897.2	618.3	9747.7	11.0	10.9	15.8	44.63	25.38	1.000	15.00	1.375	26.63
2X12X1.000/1.750T	86.40	906.4	621.6	9957.1	11.1	11.0	16.0	45.00	25.75	1.000	12.00	1.750	27.00
2X14X1.000/1.500T	86.40	901.6	625.1	9875.2	11.0	11.0	15.8	45.00	25.50	1.000	14.00	1.500	26.75
2X15X1.000/1.500T	89.28	909.4	657.7	10209.5	11.1	11.2	15.5	46.50	25.50	1.000	15.00	1.500	26.75
2X13X1.000/1.750T	89.76	915.5	659.7	10352.6	11.2	11.3	15.7	46.75	25.75	1.000	13.00	1.750	27.00
2X12X1.125/1.375T	90.01	999.3	629.0	11837.6	11.8	11.4	18.2	46.88	28.38	1.125	12.00	1.375	33.33
2X13X1.125/1.375T	92.64	1010.4	662.6	11857.6	11.9	11.7	17.9	48.25	28.38	1.125	13.00	1.375	33.33
2X12X1.125/1.500T	92.89	1013.5	663.5	11929.1	11.9	11.8	18.0	48.38	28.50	1.125	12.00	1.500	33.47
2X14X1.000/1.750T	93.12	923.6	696.7	10722.8	11.3	11.6	15.4	48.50	25.75	1.000	14.00	1.750	27.00
2X13X1.125/1.375T	95.29	1020.4	695.3	12552.6	12.0	12.0	17.6	49.63	28.38	1.125	14.00	1.375	33.33
2X13X1.125/1.500T	95.77	1024.4	699.6	12567.5	12.0	12.1	17.7	49.88	28.50	1.125	13.00	1.500	33.47
2X15X1.000/1.750T	96.48	931.3	735.0	11090.9	11.3	11.9	15.1	50.25	25.75	1.000	15.00	1.750	27.00
2X12X1.125/1.750T	98.65	1039.3	731.9	12883.9	12.1	12.4	17.6	51.38	28.75	1.125	12.00	1.750	33.75
2X13X1.125/1.500T	101.53	1043.8	771.4	13196.5	12.2	12.6	17.1	52.88	28.50	1.125	15.00	1.500	33.47
2X14X1.125/1.750T	102.01	1050.2	773.7	13364.7	12.2	12.7	17.3	53.13	28.75	1.125	13.00	1.750	33.75
2X12X1.125/2.000T	104.41	1062.3	798.8	13792.1	12.4	13.0	17.3	54.38	29.00	1.125	12.00	2.000	36.83
2X13X1.125/2.000T	105.37	1060.2	815.2	13825.1	12.3	13.0	17.0	54.88	28.75	1.125	14.00	1.750	33.75
2X14X1.125/2.000T	108.25	1073.2	846.3	14313.1	12.5	13.3	16.9	56.38	29.00	1.125	13.00	2.000	36.03
3X15X1.250/1.500T	115.20	1187.3	896.9	16733.0	13.2	14.1	18.7	60.00	31.50	1.250	15.00	1.500	40.94
3X16X1.250/1.500T	118.08	1197.5	936.1	17206.9	13.3	14.4	18.4	61.50	31.50	1.250	16.00	1.500	40.94
3X14X1.250/1.750T	119.04	1205.6	943.3	17464.4	13.4	14.5	18.5	62.00	31.75	1.250	14.00	1.750	41.25
3X17X1.250/1.750T	129.12	1236.1	1079.4	19015.9	13.6	15.4	17.6	67.25	31.75	1.250	17.00	1.750	41.25
3X15X1.250/2.000T	129.60	1242.8	1080.2	19215.6	13.6	15.5	17.8	67.50	32.00	1.250	15.00	2.000	41.56
3X16X1.250/2.000T	133.44	1252.9	1132.0	19773.7	13.7	15.8	17.5	69.50	32.00	1.250	16.00	2.000	41.56
3X17X1.375/1.750T	144.25	1397.3	1231.3	23562.7	14.6	16.9	19.1	75.13	34.75	1.375	17.00	1.750	49.50
3X15X1.375/2.000T	144.73	1404.4	1232.2	23791.7	14.6	16.9	19.3	75.38	35.00	1.375	15.00	2.000	49.84
3X16X1.375/2.000T	148.57	1416.3	1287.6	24448.6	14.7	17.3	19.0	77.38	35.00	1.375	16.00	2.000	49.84
3X17X1.375/2.000T	152.41	1427.4	1343.4	25087.0	14.7	17.6	18.7	79.38	35.00	1.375	17.00	2.000	49.84
3X16X1.500/1.750T	157.44	1557.3	1343.0	28123.5	15.4	18.1	20.9	82.00	37.75	1.500	16.00	1.750	50.50
3X17X1.500/1.750T	160.80	1570.2	1394.7	28806.3	15.5	18.3	20.7	83.75	37.75	1.500	17.00	1.750	50.50
3X15X1.500/2.000T	161.28	1577.6	1395.7	29066.2	15.6	18.4	20.8	84.00	38.00	1.500	15.00	2.000	50.88
3X16X1.500/2.000T	165.12	1591.4	1455.2	29835.1	15.6	18.7	20.5	86.00	38.00	1.500	16.00	2.000	50.88

1.2500 - 1 1/4 in.



1.375 IN. PLATE (AREA= 43.40 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R	YP	VF	***** BEAM DIMENSIONS *****			SHEAR AREA		
WT/FT	ZPL	ZFL	INERTIA	DEPTH				WEB THICK	WIDTH	FLANGE THICK			
3X 2X .125/ .100T	1.44	19.3	3.7	14.2	.6	.7	3.8	.75	3.19	.125	2.00	.108	.57
3X 2X .100/ .250T	2.04	22.4	4.4	16.9	.6	.8	3.9	1.06	3.25	.168	2.00	.250	.87
3X 2X .100/ .313T	2.28	24.6	4.8	18.9	.7	.8	3.9	1.19	3.31	.188	2.00	.313	.88
4X 2X .100/ .250T	2.40	31.1	5.1	24.5	.7	.8	4.8	1.25	4.25	.188	2.00	.250	1.06
4X 2X .100/ .313T	2.65	34.3	5.6	27.4	.8	.8	4.9	1.38	4.31	.188	2.00	.313	1.07
3X 3X .100/ .313T	2.88	29.4	6.0	23.4	.7	.8	3.9	1.50	3.31	.188	3.00	.313	.88
4X 3X .100/ .313T	3.24	41.2	7.1	34.3	.9	.8	4.9	1.69	4.31	.188	3.00	.313	1.07
3X 3X .250/ .375T	3.61	33.1	6.9	27.2	.8	.8	3.9	1.68	3.38	.250	3.00	.375	1.19
3X 3X .250/ .438T	3.96	35.9	7.5	30.0	.8	.8	4.0	2.06	3.44	.250	3.00	.438	1.24
4X 3X .250/ .375T	4.09	47.1	8.3	40.8	.9	.9	4.9	2.13	4.38	.250	3.00	.375	1.44
5X 3X .250/ .313T	4.28	58.4	9.0	52.3	1.1	.9	5.8	2.19	5.31	.250	3.00	.313	1.67
4X 3X .250/ .438T	4.44	50.9	9.2	45.1	1.0	.9	4.9	2.31	4.44	.250	3.00	.438	1.45
5X 3X .250/ .375T	4.57	63.8	10.0	58.6	1.1	.9	5.8	2.38	5.38	.250	3.00	.375	1.69
6X 3X .250/ .313T	4.68	76.6	10.8	72.6	1.3	.9	6.7	2.44	6.31	.250	3.00	.313	1.92
5X 3X .250/ .438T	4.92	68.9	11.1	64.9	1.2	.9	5.9	2.56	5.44	.250	3.00	.438	1.70
6X 3X .250/ .375T	5.85	83.3	12.0	81.3	1.3	1.0	6.8	2.63	6.38	.250	3.00	.375	1.94
6X 3X .250/ .438T	5.40	89.5	13.2	89.7	1.4	1.0	6.8	2.81	6.44	.250	3.00	.438	1.95
6X 4X .250/ .375T	5.76	94.5	14.4	97.1	1.4	1.0	6.7	3.00	6.38	.250	4.00	.375	1.94
6X 4X .250/ .438T	6.24	102.0	15.1	108.5	1.5	1.1	6.8	3.25	6.44	.250	4.00	.438	1.95
5X 4X .313/ .500T	6.84	86.4	15.5	90.3	1.4	1.0	5.8	3.56	5.50	.313	4.00	.500	2.15
7X 4X .313/ .375T	7.08	121.8	18.1	137.9	1.7	1.1	7.6	3.69	7.38	.313	4.00	.375	2.74
6X 4X .313/ .500T	7.45	111.2	18.6	125.4	1.6	1.1	6.7	3.80	6.50	.313	4.00	.500	2.46
7X 4X .313/ .438T	7.56	129.9	19.9	152.4	1.8	1.2	7.6	3.94	7.44	.313	4.00	.438	2.76
6X 4X .313/ .563T	7.93	117.6	20.2	136.7	1.7	1.2	6.8	4.13	6.56	.313	4.00	.563	2.40
7X 4X .313/ .500T	8.04	137.8	21.8	167.1	1.9	1.2	7.7	4.19	7.50	.313	4.00	.500	2.78
6X 5X .313/ .500T	8.41	122.4	21.9	146.3	1.7	1.2	6.7	4.38	6.50	.313	5.00	.500	2.46
7X 4X .313/ .563T	8.52	145.2	23.7	182.0	1.9	1.3	7.7	4.44	7.56	.313	4.00	.563	2.80
7X 5X .313/ .500T	9.00	150.7	25.6	194.3	2.0	1.3	7.6	4.69	7.50	.313	5.00	.500	2.78
8X 4X .375/ .438T	9.12	160.7	24.6	209.2	2.1	1.3	8.5	4.75	8.44	.375	4.00	.438	3.68
8X 4X .375/ .500T	9.60	158.6	28.0	212.4	2.1	1.3	7.6	5.00	7.56	.375	5.00	.500	3.78
8X 4X .375/ .563T	9.68	169.8	26.7	227.5	2.2	1.3	8.5	5.00	8.50	.375	4.00	.500	3.78
9X 4X .375/ .438T	9.85	190.3	28.4	267.4	2.3	1.4	9.4	5.13	9.44	.375	4.00	.438	4.06
8X 4X .375/ .563T	10.08	176.6	28.7	245.4	2.2	1.4	8.5	5.25	8.56	.375	4.00	.563	3.73
9X 4X .375/ .500T	10.33	199.4	30.8	289.8	2.4	1.5	9.4	5.38	9.50	.375	4.00	.500	4.08
8X 4X .375/ .625T	10.56	184.1	30.8	264.0	2.3	1.4	8.6	5.50	8.63	.375	4.00	.625	3.75
7X 6X .313/ .563T	10.68	170.0	32.2	241.7	2.2	1.4	7.5	5.56	7.56	.313	6.00	.563	2.80
9X 4X .375/ .563T	10.81	207.6	33.0	311.6	2.5	1.5	9.4	5.63	9.56	.375	5.00	.563	4.10
8X 5X .375/ .563T	11.16	191.1	33.6	283.6	2.4	1.5	8.5	5.81	8.56	.375	5.00	.563	3.73
9X 5X .375/ .500T	11.29	214.2	35.5	331.1	2.6	1.5	9.3	5.88	9.50	.375	5.00	.500	4.08
8X 5X .375/ .625T	11.77	199.1	36.2	306.3	2.5	1.5	8.5	6.13	8.63	.375	5.00	.625	3.75
9X 5X .375/ .563T	11.88	223.2	38.4	358.1	2.7	1.6	9.3	6.19	9.56	.375	5.00	.563	4.10
8X 6X .375/ .563T	12.25	203.7	38.5	321.4	2.5	1.6	8.4	6.38	8.56	.375	6.00	.563	3.73
9X 5X .375/ .625T	12.48	231.7	41.2	385.2	2.8	1.7	9.3	6.50	9.63	.375	5.00	.625	4.13
9X 6X .375/ .563T	12.96	236.7	43.7	403.7	2.8	1.7	9.2	6.75	9.56	.375	6.00	.563	4.10
10X 5X .438/ .500T	13.21	249.3	42.4	430.1	2.9	1.7	10.1	6.88	10.50	.438	5.00	.500	5.20

1.3750 - 1 3/8 in.

1.375 IN. PLATE (AREA= 43.48 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			DIMENSIONS										SHEAR AREA	
		WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	FLANGE THICK			
9X 6X	.375/ .625T	13.69	245.5	47.2	435.7	2.9	1.8	9.2	7.13	9.63	.375	6.00	.625	4.13	5.23	
10X 5X	.438/ .563T	13.94	258.6	45.6	462.4	3.0	1.8	10.1	7.19	10.56	.438	5.00	.563	5.23	5.23	
10X 5X	.438/ .625T	14.40	267.0	48.6	493.8	3.1	1.8	10.2	7.50	10.63	.438	5.00	.625	5.26	5.26	
8X 6X	.438/ .688T	14.65	220.3	46.0	382.9	2.7	1.7	8.3	7.63	8.69	.438	6.00	.688	4.41	4.87	
9X 5X	.438/ .750T	14.76	248.5	48.8	453.5	3.0	1.8	9.3	7.69	9.75	.438	5.00	.750	4.87	5.23	
10X 6X	.438/ .563T	14.88	272.3	51.4	516.2	3.2	1.9	10.0	7.75	10.56	.438	6.00	.563	5.23	5.23	
10X 5X	.438/ .688T	15.00	275.3	51.8	526.2	3.2	1.9	10.2	7.81	10.69	.438	5.00	.688	5.23	5.23	
10X 6X	.438/ .625T	15.61	281.3	55.2	554.8	3.3	2.0	10.8	8.13	10.63	.438	6.00	.625	5.26	5.26	
9X 6X	.438/ .750T	16.20	262.2	55.8	512.2	3.1	2.0	9.2	8.44	9.75	.438	6.00	.750	4.87	5.23	
10X 6X	.438/ .688T	16.32	289.7	59.0	591.2	3.4	2.0	10.0	8.50	10.69	.438	6.00	.688	5.28	5.28	
9X 7X	.438/ .688T	16.80	266.2	58.8	533.0	3.2	2.0	9.1	8.75	9.69	.438	7.00	.688	4.85	4.85	
12X 5X	.500/ .563T	16.92	328.8	60.8	707.3	3.7	2.2	11.8	8.81	12.56	.500	5.00	.563	6.97	6.97	
10X 6X	.438/ .750T	17.05	297.9	63.0	630.1	3.5	2.1	10.0	8.88	10.75	.438	6.00	.750	5.31	5.31	
12X 5X	.500/ .625T	17.53	338.1	63.8	751.5	3.8	2.2	11.8	9.13	12.63	.500	5.00	.625	7.00	7.00	
10X 7X	.438/ .688T	17.64	302.3	66.2	655.5	3.5	2.2	9.9	9.19	10.69	.438	7.00	.688	5.28	5.28	
12X 6X	.500/ .563T	18.01	343.7	67.1	781.8	3.8	2.3	11.7	9.38	12.56	.500	6.00	.563	6.97	6.97	
12X 5X	.500/ .688T	18.12	346.7	67.5	794.9	3.9	2.3	11.8	9.44	12.69	.500	5.00	.688	7.03	7.03	
18X 7X	.438/ .750T	18.49	310.2	71.7	697.9	3.6	2.2	9.9	9.63	10.75	.438	7.00	.750	5.31	5.31	
12X 6X	.500/ .625T	18.72	353.4	71.5	833.0	4.0	2.4	11.6	9.75	12.63	.500	6.00	.625	7.00	7.00	
9X 8X	.438/ .750T	19.08	284.0	78.0	624.7	3.4	2.2	8.9	9.94	9.75	.438	8.00	.750	4.87	4.87	
12X 5X	.500/ .688T	19.45	362.1	75.9	883.0	4.1	2.4	11.6	10.13	12.69	.500	6.00	.688	7.03	7.03	
12X 5X	.500/ .875T	19.93	369.8	78.6	924.0	4.1	2.5	11.8	10.38	12.88	.500	5.00	.875	7.13	7.13	
12X 6X	.500/ .750T	20.16	370.6	80.4	933.7	4.2	2.5	11.6	10.50	12.75	.500	6.00	.750	7.06	7.06	
12X 7X	.500/ .688T	20.76	375.6	84.4	969.1	4.2	2.6	11.5	10.81	12.69	.500	7.00	.688	7.03	7.03	
12X 7X	.500/ .750T	21.60	384.4	89.8	1028.2	4.3	2.7	11.5	11.25	12.75	.500	7.00	.750	7.06	7.06	
14X 6X	.563/ .625T	22.33	426.6	90.8	1197.8	4.7	2.8	13.2	11.63	14.63	.563	6.00	.625	9.01	9.01	
12X 8X	.500/ .750T	23.04	396.1	99.0	1118.6	4.5	2.8	11.3	12.00	12.75	.500	8.00	.750	7.06	7.06	
14X 6X	.563/ .688T	23.04	435.7	95.8	1261.6	4.8	2.9	13.2	12.00	14.69	.563	6.00	.688	9.04	9.04	
12X 7X	.500/ .875T	23.29	399.8	100.1	1141.5	4.5	2.9	11.4	12.13	12.88	.500	7.00	.875	7.13	7.13	
14X 6X	.563/ .750T	23.77	444.6	101.0	1327.2	4.9	3.0	13.1	12.38	14.75	.563	6.00	.750	9.08	9.08	
14X 7X	.563/ .688T	24.36	450.2	105.7	1375.1	4.9	3.1	13.0	12.69	14.69	.563	7.00	.688	9.04	9.04	
12X 8X	.500/ .875T	24.96	411.8	110.9	1245.7	4.7	3.0	11.2	13.00	12.88	.500	8.00	.875	7.13	7.13	
14X 7X	.563/ .750T	25.21	459.1	111.7	1448.2	5.1	3.2	13.0	13.13	14.75	.563	7.00	.750	9.08	9.08	
12X 7X	.563/ 1.000T	26.40	413.6	113.2	1277.8	4.7	3.1	11.3	13.75	13.00	.563	7.00	1.000	8.09	8.09	
14X 8X	.563/ .750T	26.65	471.7	122.3	1565.9	5.2	3.3	12.8	13.88	14.75	.563	8.00	.750	9.08	9.08	
14X 7X	.563/ .875T	26.88	475.5	123.5	1593.4	5.3	3.4	12.9	14.00	14.88	.563	7.00	.875	9.15	9.15	
12X 8X	.563/ 1.000T	28.32	425.3	125.9	1393.0	4.9	3.3	11.1	14.75	13.00	.563	8.00	1.000	8.09	8.09	
14X 8X	.563/ .875T	28.57	488.3	135.9	1720.5	5.4	3.5	12.7	14.88	14.88	.563	8.00	.875	9.15	9.15	
14X 9X	.563/ .875T	30.24	499.5	148.3	1858.4	5.6	3.7	12.5	15.75	14.88	.563	9.00	.875	9.15	9.15	
14X 8X	.563/ 1.000T	30.49	503.1	149.7	1889.0	5.6	3.8	12.6	15.88	15.00	.563	8.00	1.000	9.22	9.22	
14X 7X	.625/ 1.125T	31.93	503.3	150.8	1914.9	5.6	3.8	12.7	16.63	15.13	.625	7.00	1.125	10.32	10.32	
12X 10X	.563/ 1.000T	32.16	443.8	149.7	1689.3	5.2	3.6	10.7	16.75	13.00	.563	10.00	1.000	8.09	8.09	
14X 9X	.563/ 1.000T	32.41	514.0	163.7	2033.4	5.8	4.0	12.4	16.88	15.00	.563	9.00	1.000	9.22	9.22	
12X 9X	.625/ 1.125T	33.85	446.9	153.3	1855.3	5.2	3.7	10.8	17.63	13.13	.625	9.00	1.125	9.07	9.07	
14X 8X	.625/ 1.125T	34.08	515.8	166.4	2076.5	5.8	4.0	12.5	17.75	15.13	.625	8.00	1.125	10.32	10.32	

1.3750 - 1 3/8 in.



1.375 IN. PLATE (AREA= 43.48 SQ. IN.)

NOMINAL SIZE			SECTION MODULUS			R	***** BEAM DIMENSIONS *****			SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA	YF	AREA	DEPTH	THICK	WIDTH	FLANGE THICK	
16X 7X .688/1.000T	34.56	567.5	168.2	2303.6	6.2	4.2	14.2	18.00	17.00	12.64
12X10X .625/1.125T	36.00	455.5	166.9	1771.5	5.3	3.9	10.6	18.75	13.13	9.07
16X 8X .688/1.000T	36.48	581.0	183.9	2566.7	6.4	4.4	14.0	19.00	17.00	12.64
16X 7X .688/1.250T	37.92	594.2	194.6	2723.8	6.6	4.6	14.0	19.75	17.25	12.81
16X 9X .688/1.000T	38.40	593.1	199.8	2745.5	6.6	4.6	13.7	20.00	17.00	12.64
18X 8X .750/.875T	39.36	643.5	201.1	3103.5	7.0	4.8	15.4	20.50	18.00	15.19
14X 9X .688/1.250T	40.09	538.4	200.7	2438.5	6.1	4.5	12.1	20.88	15.25	11.44
16X10X .688/1.000T	40.32	603.5	215.5	2918.4	6.7	4.8	13.5	21.00	17.00	12.64
16X 9X .688/1.125T	40.57	606.8	216.7	2954.4	6.8	4.9	13.6	21.13	17.13	12.73
18X 9X .750/.875T	41.05	556.4	216.7	3299.9	7.1	5.0	15.2	21.38	18.88	15.19
18X 8X .750/1.000T	41.28	659.8	218.0	3338.7	7.2	5.1	15.3	21.50	19.00	15.28
16X10X .688/1.125T	42.72	617.4	234.5	3144.6	6.9	5.1	13.4	22.25	17.13	12.73
16X11X .688/1.125T	44.89	626.5	252.1	3326.1	7.1	5.3	13.2	23.38	17.13	12.73
18X 9X .750/1.125T	45.37	687.8	254.7	3811.8	7.5	5.5	15.0	23.63	19.13	15.38
18X11X .750/1.000T	47.04	694.7	271.0	3921.1	7.6	5.7	14.7	24.50	19.00	15.28
18X 9X .750/1.250T	47.52	701.6	273.9	4062.6	7.7	5.8	14.8	24.75	19.25	15.47
18X11X .750/1.125T	49.69	709.3	293.9	4261.0	7.8	6.0	14.5	25.88	19.13	15.38
18X10X .750/1.250T	49.92	712.9	295.6	4389.7	7.9	6.0	14.6	26.00	19.25	15.47
18X12X .750/1.125T	51.84	718.6	313.6	4476.6	8.0	6.2	14.3	27.00	19.13	15.38
18X11X .750/1.250T	52.32	723.1	317.4	4549.5	8.0	6.3	14.3	27.25	19.25	15.47
18X 9X .875/1.125T	54.72	811.7	321.8	4516.6	8.7	6.7	16.8	28.50	22.13	20.57
18X 9X .875/1.500T	56.16	726.7	320.8	4645.6	8.0	6.4	14.5	29.25	19.50	18.27
21X10X .875/1.125T	56.89	824.7	344.3	5709.8	8.8	6.9	16.6	29.63	22.13	28.57
21X 9X .875/1.375T	59.04	840.9	364.7	6082.5	9.0	7.2	16.6	30.75	22.38	28.79
21X11X .875/1.125T	59.04	836.4	366.8	5993.1	9.0	7.2	16.3	30.75	22.13	28.57
21X12X .875/1.125T	61.21	847.3	389.6	6273.1	9.1	7.4	16.1	31.88	22.13	28.57
21X 9X .875/1.500T	61.21	853.9	386.1	6347.8	9.2	7.4	16.4	31.88	22.50	28.89
21X10X .875/1.375T	61.69	854.1	392.3	6385.6	9.2	7.5	16.3	32.13	22.38	28.79
21X10X .875/1.500T	64.09	867.2	416.3	6715.2	9.3	7.7	16.1	33.38	22.50	28.89
21X11X .875/1.375T	64.32	865.7	419.4	6711.9	9.3	7.8	16.0	33.50	22.38	28.79
21X11X .875/1.500T	66.97	878.6	445.7	7059.7	9.5	8.0	15.8	34.88	22.50	28.89
24X10X1.000/1.125T	67.68	955.1	425.1	7796.7	10.0	8.2	18.3	35.25	25.13	28.51
21X13X .875/1.375T	69.60	885.8	474.2	7337.4	9.6	8.3	15.5	36.25	22.38	28.79
24X11X1.000/1.125T	69.85	968.2	450.2	8144.7	10.1	8.4	18.1	36.38	25.13	28.51
21X12X .875/1.500T	69.85	889.2	475.7	7398.7	9.6	8.4	15.6	36.38	22.50	28.89
24X12X1.000/1.125T	72.00	980.4	475.4	8485.9	10.2	8.7	17.8	37.50	25.13	28.51
21X14X .875/1.375T	72.25	894.2	581.1	7628.6	9.7	8.5	15.2	37.63	22.38	28.79
24X10X1.000/1.375T	72.48	987.5	478.3	8621.3	10.3	8.7	18.0	37.75	25.38	28.76
21X13X .875/1.500T	72.73	898.4	585.0	7718.4	9.7	8.6	15.3	37.88	22.50	28.89
24X10X1.000/1.500T	74.88	1002.1	504.8	9021.9	10.5	9.0	17.9	39.00	25.50	28.88
24X11X1.000/1.375T	75.13	1088.9	588.8	9025.6	10.5	9.0	17.7	39.13	25.38	28.76
21X15X .875/1.500T	75.61	906.9	534.7	8031.1	9.8	8.9	15.0	39.38	22.50	28.89
24X11X1.000/1.500T	77.76	1015.6	538.2	9453.4	10.6	9.3	17.6	40.50	25.50	28.88
21X15X .875/1.500T	78.49	914.5	564.1	8329.4	9.9	9.1	14.8	40.88	22.50	28.89
24X10X1.000/1.750T	79.68	1029.0	557.8	9811.0	10.7	9.5	17.6	41.50	27.13	27.13

1.3750 - 1 3/8 in.

1.375 IN. PLATE (AREA= 43.48 SQ. IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL	INERTIA						WEB THICK	FLANGE WIDTH	FLANGE THICK	
24X13X1.000/1.375T	80.41	1024.5	570.6	9805.6	10.7	9.6	17.2	41.00	25.30	1.000	13.00	1.375	26.76
24X12X1.000/1.500T	80.64	1027.8	571.5	9870.3	10.7	9.6	17.3	42.00	25.50	1.000	12.00	1.500	26.88
21X16X .875/1.500T	81.37	921.6	593.6	8619.9	10.0	9.4	14.5	42.30	22.50	.875	16.00	1.500	28.89
24X11X1.000/1.750T	83.04	1042.4	596.4	10289.6	10.9	9.9	17.3	43.25	25.75	1.000	11.00	1.750	27.13
24X14X1.000/1.375T	83.04	1034.7	601.1	10172.8	10.8	9.8	16.9	43.25	25.38	1.000	14.00	1.375	26.76
24X13X1.000/1.500T	83.52	1039.1	605.3	10279.8	10.9	9.9	17.0	43.50	25.50	1.000	13.00	1.500	26.88
24X15X1.000/1.375T	85.69	1043.9	631.2	10524.4	10.9	10.1	16.7	44.63	25.38	1.000	15.00	1.375	26.76
24X12X1.000/1.500T	86.40	1054.5	635.1	10751.9	11.0	10.2	16.9	45.00	25.75	1.000	12.00	1.750	27.13
24X14X1.000/1.500T	86.40	1049.1	638.3	10665.1	11.0	10.2	16.7	45.00	25.50	1.000	14.00	1.500	26.88
24X15X1.000/1.500T	89.28	1058.4	671.5	11081.6	11.1	10.4	16.4	46.50	25.50	1.000	15.00	1.500	26.88
24X13X1.000/1.750T	89.76	1065.5	673.9	11197.3	11.1	10.5	16.6	46.75	25.75	1.000	13.00	1.750	27.13
27X12X1.125/1.375T	90.01	1156.7	643.5	12383.6	11.7	10.6	19.1	46.00	28.38	1.125	12.00	1.375	33.47
27X13X1.125/1.375T	92.64	1169.8	677.9	12770.1	11.8	10.9	18.8	48.25	28.38	1.125	13.00	1.375	33.47
27X12X1.125/1.500T	92.89	1173.2	678.9	12847.4	11.8	11.0	18.9	48.38	28.50	1.125	12.00	1.500	33.61
24X14X1.000/1.750T	93.12	1075.1	711.7	11615.8	11.2	10.8	16.3	48.50	25.75	1.000	14.00	1.750	27.13
27X14X1.125/1.375T	95.29	1181.5	711.2	13218.3	11.9	11.2	18.6	49.63	28.38	1.125	14.00	1.375	33.47
27X13X1.125/1.500T	95.77	1186.2	715.0	13336.0	12.0	11.2	18.6	49.00	28.50	1.125	13.00	1.500	33.61
24X15X1.000/1.750T	96.48	1084.4	750.0	12033.2	11.3	11.1	16.0	50.25	25.75	1.000	15.00	1.750	27.13
27X12X1.125/1.750T	98.65	1203.5	749.0	13907.6	12.1	11.6	18.6	51.38	28.75	1.125	12.00	1.750	33.89
27X13X1.125/1.750T	102.01	1216.3	791.7	14446.3	12.2	11.9	18.2	53.13	28.75	1.125	13.00	1.750	33.89
27X14X1.125/1.750T	104.41	1230.3	817.7	14928.2	12.3	12.1	18.2	54.38	29.00	1.125	12.00	2.000	34.17
27X14X1.125/1.750T	105.37	1228.0	834.1	14983.7	12.3	12.2	17.9	54.00	28.75	1.125	14.00	1.750	33.89
27X13X1.125/2.000T	108.25	1243.1	866.3	15506.7	12.5	12.5	17.9	56.38	29.00	1.125	13.00	2.000	34.17
30X15X1.250/1.500T	115.20	1368.1	919.0	18072.2	13.2	13.2	19.7	60.00	31.50	1.250	15.00	1.500	41.09
30X16X1.250/1.500T	118.08	1379.9	959.1	18691.6	13.3	13.5	19.4	61.50	31.50	1.250	16.00	1.500	41.09
30X14X1.250/1.750T	119.04	1389.1	966.8	18882.8	13.4	13.6	19.5	62.00	31.75	1.250	14.00	1.750	41.41
30X17X1.250/1.750T	129.12	1424.6	1106.1	20624.7	13.6	14.5	18.6	67.25	31.75	1.250	17.00	1.750	41.41
30X15X1.250/2.000T	129.68	1432.1	1107.3	20831.2	13.7	14.6	18.8	68.50	32.00	1.250	15.00	2.000	41.72
30X16X1.250/2.000T	133.44	1443.0	1160.3	21471.0	13.8	14.9	18.5	69.50	32.00	1.250	16.00	2.000	41.72
33X17X1.375/1.750T	144.25	1601.3	1263.3	25510.9	14.7	15.9	20.2	75.13	34.75	1.375	17.00	1.750	49.67
33X15X1.375/2.000T	144.73	1609.2	1264.7	25788.6	14.7	16.0	20.4	75.38	35.00	1.375	15.00	2.000	50.02
33X16X1.375/2.000T	148.57	1622.8	1321.5	26494.3	14.8	16.3	20.8	77.38	35.00	1.375	16.00	2.000	50.02
33X17X1.375/2.000T	152.41	1635.5	1378.7	27211.1	14.9	16.6	19.7	79.39	35.00	1.375	17.00	2.000	50.02
36X16X1.500/1.750T	157.44	1774.6	1379.8	30378.0	15.6	17.1	22.0	82.00	37.75	1.500	16.00	1.750	58.69
36X17X1.500/1.750T	160.88	1789.2	1432.7	31128.5	15.6	17.4	21.7	83.75	37.75	1.500	17.00	1.750	58.69
36X15X1.500/2.000T	161.28	1797.4	1434.2	31483.1	15.7	17.5	21.9	84.00	38.00	1.500	15.00	2.000	59.06
36X16X1.500/2.000T	165.12	1813.1	1435.1	32264.2	15.8	17.8	21.6	86.00	38.00	1.500	16.00	2.000	59.06

1.3750 - 1 3/8 in.



1.500 IN. PLATE (AREA= 51.75 SQ.IN.)

NOMINAL SIZE			SECTION MODULUS			R	VP	VF	***** BEAM DIMENSIONS *****				SHEAR AREA	
3X 2X	4X 2X	6X 2X	KT/FT	ZPL	ZFL				INERTIA	AREA	DEPTH	WEB THICK		FLANGE THICK
3X 2X .125/ .100T	3X 2X .180/ .250T	3X 2X .180/ .250T	1.44	21.9	4.5	17.4	.6	3.9	.75	3.19	.125	2.00	.100	.59
3X 2X .180/ .250T	3X 2X .180/ .250T	3X 2X .180/ .250T	2.04	24.9	5.1	28.2	.6	3.9	1.06	3.25	.108	2.00	.250	.69
3X 2X .180/ .250T	3X 2X .180/ .250T	3X 2X .180/ .250T	2.28	27.1	5.6	22.2	.6	4.0	1.19	3.31	.108	2.00	.313	.90
4X 2X .180/ .250T	4X 2X .180/ .250T	4X 2X .180/ .250T	2.48	33.4	5.7	27.9	.7	4.0	1.25	4.25	.108	2.00	.250	1.08
4X 2X .180/ .250T	4X 2X .180/ .250T	4X 2X .180/ .250T	2.65	36.6	6.2	31.0	.8	5.0	1.30	4.31	.108	2.00	.313	1.09
3X 3X .180/ .250T	3X 3X .180/ .250T	3X 3X .180/ .250T	2.80	31.9	6.8	26.9	.7	4.0	1.50	3.31	.108	3.00	.313	.90
4X 3X .180/ .250T	4X 3X .180/ .250T	4X 3X .180/ .250T	3.24	43.6	7.7	38.9	.8	4.9	1.69	4.31	.168	3.00	.313	1.09
3X 3X .250/ .375T	3X 3X .250/ .375T	3X 3X .250/ .375T	3.61	35.7	7.7	38.9	.8	4.9	1.88	3.38	.250	3.00	.375	1.22
3X 3X .250/ .375T	3X 3X .250/ .375T	3X 3X .250/ .375T	3.96	38.5	8.3	33.8	.8	4.9	2.06	3.44	.250	3.00	.430	1.24
4X 3X .250/ .375T	4X 3X .250/ .375T	4X 3X .250/ .375T	4.09	49.6	9.8	44.9	.9	5.0	2.13	4.30	.250	3.00	.375	1.47
5X 3X .250/ .375T	5X 3X .250/ .375T	5X 3X .250/ .375T	4.20	61.0	9.6	56.6	1.0	5.9	2.19	5.31	.250	3.00	.313	1.70
4X 3X .250/ .438T	4X 3X .250/ .438T	4X 3X .250/ .438T	4.44	53.6	9.8	49.4	1.0	5.9	2.31	4.44	.250	3.00	.430	1.59
5X 3X .250/ .375T	5X 3X .250/ .375T	5X 3X .250/ .375T	4.57	66.5	10.6	63.1	1.1	5.9	2.30	5.38	.250	3.00	.375	1.72
6X 3X .250/ .375T	6X 3X .250/ .375T	6X 3X .250/ .375T	4.68	79.4	11.3	77.3	1.2	6.0	2.44	6.31	.250	3.00	.313	1.95
5X 3X .250/ .438T	5X 3X .250/ .438T	5X 3X .250/ .438T	4.92	71.9	11.7	69.6	1.1	6.0	2.56	5.44	.250	3.00	.430	1.74
6X 3X .250/ .375T	6X 3X .250/ .375T	6X 3X .250/ .375T	5.05	86.5	12.5	86.3	1.3	6.9	2.63	6.38	.250	3.00	.375	1.97
6X 3X .250/ .438T	6X 3X .250/ .438T	6X 3X .250/ .438T	5.48	93.1	13.7	95.0	1.3	6.9	2.81	6.44	.250	3.00	.430	1.99
6X 4X .250/ .375T	6X 4X .250/ .375T	6X 4X .250/ .375T	5.76	90.5	15.0	102.7	1.4	6.0	3.00	6.38	.250	4.00	.375	1.97
6X 4X .250/ .438T	6X 4X .250/ .438T	6X 4X .250/ .438T	6.24	106.6	16.7	114.4	1.4	6.9	3.25	6.44	.250	4.00	.430	1.99
5X 4X .313/ .500T	7X 4X .313/ .500T	7X 4X .313/ .500T	6.84	98.7	16.2	96.8	1.3	5.9	3.56	5.58	.313	4.00	.500	2.19
7X 4X .313/ .500T	7X 4X .313/ .500T	7X 4X .313/ .500T	7.08	127.6	18.7	144.6	1.6	7.7	3.69	7.38	.313	4.00	.375	2.70
6X 4X .313/ .500T	6X 4X .313/ .500T	6X 4X .313/ .500T	7.45	117.0	19.2	132.0	1.5	6.9	3.88	6.50	.313	4.00	.500	2.50
7X 4X .313/ .438T	7X 4X .313/ .438T	7X 4X .313/ .438T	7.56	136.7	20.5	159.6	1.7	7.8	3.94	7.44	.313	4.00	.430	2.80
6X 4X .313/ .563T	6X 4X .313/ .563T	6X 4X .313/ .563T	7.93	124.0	20.8	143.8	1.6	6.9	4.13	6.56	.313	4.00	.563	2.52
7X 4X .313/ .500T	7X 4X .313/ .500T	7X 4X .313/ .500T	8.04	145.4	22.4	174.8	1.8	7.8	4.19	7.50	.313	4.00	.500	2.82
6X 5X .313/ .500T	6X 5X .313/ .500T	6X 5X .313/ .500T	8.41	129.5	22.6	153.8	1.7	6.0	4.38	6.50	.313	5.00	.500	2.50
7X 4X .313/ .563T	7X 4X .313/ .563T	7X 4X .313/ .563T	8.52	153.8	24.3	190.3	1.8	7.8	4.44	7.56	.313	4.00	.563	2.84
7X 5X .313/ .500T	7X 5X .313/ .500T	7X 5X .313/ .500T	9.00	168.0	26.3	203.1	1.9	7.7	4.69	7.58	.313	5.00	.500	2.82
8X 4X .375/ .500T	8X 4X .375/ .500T	8X 4X .375/ .500T	9.12	178.4	27.3	218.1	2.0	8.7	4.75	8.44	.375	4.00	.430	3.73
7X 5X .313/ .563T	7X 5X .313/ .563T	7X 5X .313/ .563T	9.60	169.1	28.6	221.9	2.0	7.7	5.08	7.56	.313	5.00	.563	2.84
8X 4X .375/ .563T	8X 4X .375/ .563T	8X 4X .375/ .563T	9.68	179.8	27.3	237.1	2.0	8.7	5.13	8.44	.375	4.00	.500	3.75
9X 4X .375/ .438T	9X 4X .375/ .438T	9X 4X .375/ .438T	9.85	203.0	29.8	277.8	2.2	9.6	5.25	9.44	.375	4.00	.430	4.10
8X 4X .375/ .563T	8X 4X .375/ .563T	8X 4X .375/ .563T	10.08	188.5	29.4	255.7	2.1	8.7	5.56	8.56	.375	4.00	.563	3.77
9X 4X .375/ .500T	9X 4X .375/ .500T	9X 4X .375/ .500T	10.13	213.4	31.4	301.1	2.3	9.6	5.38	9.58	.375	4.00	.500	4.13
8X 4X .375/ .625T	8X 4X .375/ .625T	8X 4X .375/ .625T	10.56	197.1	31.5	278.9	2.2	8.7	5.58	8.63	.375	4.00	.625	3.88
7X 6X .313/ .563T	7X 6X .313/ .563T	7X 6X .313/ .563T	10.68	182.3	32.9	252.4	2.1	7.7	5.56	7.56	.313	6.00	.563	2.84
9X 4X .375/ .563T	9X 4X .375/ .563T	9X 4X .375/ .563T	10.81	222.9	33.7	323.7	2.4	9.6	5.63	9.56	.375	4.00	.563	4.15
8X 5X .375/ .563T	8X 5X .375/ .563T	8X 5X .375/ .563T	11.16	205.3	34.3	295.4	2.3	8.6	5.81	8.56	.375	5.00	.563	3.77
9X 5X .375/ .500T	9X 5X .375/ .500T	9X 5X .375/ .500T	11.29	230.6	36.2	344.0	2.4	9.5	5.88	9.58	.375	5.00	.500	4.13
8X 5X .375/ .625T	8X 5X .375/ .625T	8X 5X .375/ .625T	11.77	214.7	36.9	319.0	2.3	8.6	6.13	8.63	.375	5.00	.625	3.88
9X 5X .375/ .563T	9X 5X .375/ .563T	9X 5X .375/ .563T	11.88	241.1	39.1	372.8	2.5	9.5	6.19	9.56	.375	5.00	.563	4.15
8X 6X .375/ .625T	8X 6X .375/ .625T	8X 6X .375/ .625T	12.25	220.2	39.2	334.8	2.4	8.5	6.38	8.56	.375	6.00	.625	3.77
9X 6X .375/ .563T	9X 6X .375/ .563T	9X 6X .375/ .563T	12.48	251.2	42.8	403.2	2.6	9.5	6.58	9.63	.375	5.00	.563	4.17
10X 5X .438/ .500T	10X 5X .438/ .500T	10X 5X .438/ .500T	12.96	257.2	44.5	416.4	2.7	9.4	6.75	9.56	.375	6.00	.563	4.15
9X 6X .375/ .563T	9X 6X .375/ .563T	9X 6X .375/ .563T	13.21	270.7	43.1	446.4	2.8	10.4	6.88	10.58	.438	5.00	.500	5.26

1.5000 - 1 1/2 in.

1.500 IN. PLATE (AREA= 51.75 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS				***** BEAM DIMENSIONS *****				SHEAR		
WT/FT	ZPL	ZFL	INERTIA	R	VP	VF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	AREA
9X 6X .375/.625T	13.69	267.7	48.8	2.8	1.7	9.4	7.13	9.63	.375	6.00	.625	4.17
10X 5X .438/.563T	13.60	281.7	46.4	2.9	1.7	10.4	7.19	10.56	.438	5.00	.563	5.20
10X 5X .438/.625T	14.48	291.7	49.4	2.9	1.8	10.4	7.50	10.63	.438	5.00	.625	5.31
8X 6X .438/.500T	14.65	240.3	46.8	2.6	1.7	8.5	7.63	8.69	.438	6.00	.600	4.66
9X 5X .438/.750T	14.76	271.6	49.6	2.8	1.7	9.5	7.69	9.75	.438	5.00	.750	4.93
10X 6X .438/.563T	14.88	298.1	52.3	3.0	1.8	10.3	7.75	10.56	.438	6.00	.563	5.20
10X 5X .438/.600T	15.00	301.6	52.7	3.0	1.8	10.4	7.81	10.69	.438	5.00	.600	5.34
10X 6X .438/.625T	15.61	309.8	56.1	3.1	1.9	10.3	8.13	10.63	.438	6.00	.625	5.31
9X 6X .438/.750T	16.20	280.3	56.8	3.0	1.9	9.4	8.44	9.75	.438	6.00	.750	4.93
10X 6X .438/.600T	16.32	319.1	59.9	3.2	1.9	10.3	8.50	10.69	.438	6.00	.600	5.34
9X 7X .438/.600T	16.88	293.3	59.8	3.0	1.9	9.3	8.75	9.69	.438	7.00	.600	4.90
12X 5X .500/.563T	16.92	362.7	61.8	3.5	2.0	12.0	8.81	12.56	.500	5.00	.563	7.03
10X 6X .438/.750T	17.05	329.1	63.9	3.3	2.0	10.3	8.80	10.75	.438	6.00	.750	5.37
12X 5X .500/.625T	17.53	373.8	64.7	3.6	2.1	12.0	9.13	12.63	.500	5.00	.625	7.07
10X 7X .438/.600T	17.64	334.6	67.2	3.3	2.0	10.2	9.19	10.69	.438	7.00	.600	5.34
12X 6X .500/.563T	18.01	300.6	68.8	3.6	2.1	11.9	9.38	12.56	.500	6.00	.563	7.03
12X 5X .500/.600T	18.12	304.2	68.5	3.7	2.1	12.0	9.44	12.69	.500	5.00	.600	7.10
10X 7X .438/.750T	18.49	344.3	71.7	3.4	2.1	10.1	9.63	10.75	.438	7.00	.750	5.37
12X 6X .500/.625T	18.72	392.3	72.6	3.8	2.2	11.9	9.75	12.63	.500	6.00	.625	7.07
9X 8X .438/.750T	19.08	315.2	71.1	3.3	2.1	9.2	9.94	9.75	.438	8.00	.750	4.93
12X 6X .500/.600T	19.45	402.9	77.0	3.9	2.3	11.9	10.13	12.69	.500	6.00	.600	7.10
12X 5X .500/.875T	19.93	412.2	79.7	3.9	2.3	12.0	10.38	12.88	.500	5.00	.875	7.19
12X 6X .500/.750T	20.16	413.3	81.6	3.9	2.3	11.9	10.50	12.75	.500	6.00	.750	7.13
12X 7X .500/.600T	20.76	419.5	85.6	4.0	2.4	11.8	10.81	12.69	.500	7.00	.600	7.10
12X 7X .500/.750T	21.60	430.4	91.0	4.1	2.5	11.8	11.25	12.75	.500	7.00	.750	7.13
14X 6X .563/.625T	22.33	477.9	92.8	4.4	2.6	13.5	11.63	14.63	.563	6.00	.625	9.08
12X 8X .500/.750T	23.84	445.0	100.3	4.3	2.6	11.6	12.00	12.75	.500	8.00	.750	7.13
14X 6X .563/.600T	23.04	400.9	97.1	4.5	2.7	13.5	12.00	14.69	.563	6.00	.600	9.11
12X 7X .500/.875T	23.29	449.4	101.5	4.3	2.6	11.7	12.13	12.88	.500	7.00	.875	7.19
14X 6X .563/.750T	23.77	499.8	102.4	4.6	2.8	13.5	12.38	14.75	.563	6.00	.750	9.15
14X 7X .563/.600T	24.36	506.7	107.1	4.7	2.8	13.4	12.63	14.69	.563	7.00	.600	9.11
12X 8X .500/.875T	24.96	464.4	112.4	4.5	2.8	11.6	13.00	12.88	.500	8.00	.875	7.19
14X 7X .563/.750T	25.21	517.6	113.2	4.8	2.9	13.3	13.13	14.75	.563	7.00	.750	9.15
12X 7X .563/1.000T	26.48	466.8	114.8	4.5	2.9	11.6	13.75	13.88	.563	7.00	1.000	8.16
14X 8X .563/.750T	26.65	533.2	123.9	5.0	3.1	13.2	13.00	14.75	.563	8.00	.750	9.15
14X 7X .563/.875T	26.88	537.7	125.1	4.7	3.1	13.3	14.00	14.80	.563	7.00	.875	9.22
12X 8X .563/1.000T	28.32	481.5	127.2	4.7	3.0	11.5	14.75	13.88	.563	8.00	1.000	8.16
14X 8X .563/.875T	28.57	553.7	137.7	5.2	3.3	13.1	14.00	14.80	.563	8.00	.875	9.22
14X 9X .563/.875T	30.24	567.7	150.2	5.4	3.4	13.0	15.75	14.88	.563	9.00	.875	9.22
14X 8X .563/1.000T	30.49	572.8	151.6	5.4	3.5	13.0	15.00	15.00	.563	8.00	1.000	9.29
14X 7X .625/1.125T	31.93	572.3	152.9	5.4	3.5	13.1	16.63	15.13	.625	7.00	1.125	10.39
12X10X .563/1.000T	32.16	585.1	151.7	5.8	3.3	11.2	16.75	13.88	.563	10.00	1.000	8.16
14X 9X .563/1.000T	32.41	585.9	165.8	5.6	3.6	12.9	16.00	15.00	.563	9.00	1.000	9.29
12X 9X .625/1.125T	33.85	588.8	155.4	5.0	3.4	11.2	17.63	13.13	.625	9.00	1.125	9.14
14X 8X .625/1.125T	34.08	587.9	168.7	5.6	3.7	12.9	17.75	15.13	.625	8.00	1.125	10.39

1.5000 - 1 1/2 in.



1.500 IN. PLATE (AREA= 51.75 SQ. IN.)

NOMINAL SIZE	SECTION MODULUS			R	YF	AREA	DEPTH	DIMENSIONS		SHEAR AREA	
	WT/FT	ZPL	ZFL					WEB THICK	FLANGE WIDTH		THICK
16X 7X .688/1.000T	34.56	646.4	170.5	6.0	3.9	14.6	18.00	.688	7.00	1.000	12.73
12X10X .625/1.125T	36.00	519.8	169.2	5.1	3.6	11.0	18.75	.625	10.00	1.125	9.14
16X 8X .688/1.000T	36.48	653.0	186.5	6.2	4.1	14.4	19.00	.688	8.00	1.000	12.73
12X10X .625/1.125T	37.92	678.9	197.3	6.3	4.2	14.5	19.75	.688	7.00	1.250	12.90
16X 9X .688/1.000T	38.48	677.9	202.6	6.3	4.3	14.2	20.00	.688	9.00	1.000	12.73
18X 8X .750/.875T	39.36	734.8	204.1	6.7	4.4	15.9	20.50	.750	8.00	.875	15.29
14X 9X .688/1.250T	40.09	616.1	203.5	5.9	4.2	12.6	20.88	.688	9.00	1.250	11.52
16X10X .688/1.000T	40.32	691.0	218.5	6.5	4.4	14.1	21.00	.688	10.00	1.000	12.73
16X 9X .688/1.125T	40.57	694.8	219.7	6.5	4.5	14.2	21.13	.688	9.00	1.125	12.82
18X 9X .750/.875T	41.05	758.5	219.9	6.9	4.6	15.8	21.38	.750	9.00	.875	15.29
18X 8X .750/1.000T	41.28	754.5	221.2	6.9	4.6	15.9	21.50	.750	8.00	1.000	15.38
16X10X .688/1.125T	42.72	708.0	237.7	6.7	4.7	13.9	22.25	.688	10.00	1.125	12.82
16X11X .688/1.125T	44.89	719.4	255.5	6.8	4.9	13.7	23.38	.688	11.00	1.125	15.47
18X 9X .750/1.125T	45.37	788.8	258.5	7.3	5.1	15.5	23.63	.750	9.00	1.125	15.47
18X11X .750/1.000T	47.04	797.5	274.9	7.4	5.3	15.2	24.50	.750	11.00	1.000	15.38
18X 9X .750/1.250T	47.52	885.6	277.9	7.5	5.3	15.4	24.75	.750	9.00	1.250	15.56
18X11X .750/1.125T	49.69	815.3	298.1	7.6	5.5	15.1	25.00	.750	11.00	1.125	15.47
18X10X .750/1.250T	49.92	819.5	299.9	7.7	5.6	15.2	26.00	.750	10.00	1.250	15.56
18X12X .750/1.125T	51.84	826.8	318.1	7.8	5.7	14.9	27.00	.750	12.00	1.125	15.47
18X11X .750/1.250T	52.32	832.1	322.0	7.8	5.8	15.0	27.25	.750	11.00	1.250	15.56
21X 9X .875/1.125T	54.72	931.4	327.1	8.4	6.1	17.5	28.50	.875	9.00	1.125	20.68
18X 9X .875/1.500T	56.16	835.0	326.0	7.8	5.9	15.1	29.25	.875	9.00	1.500	18.38
21X10X .875/1.125T	56.89	947.1	349.9	8.6	6.4	17.3	29.63	.875	10.00	1.125	20.68
21X 9X .875/1.375T	59.04	966.3	370.7	8.6	6.6	17.3	30.75	.875	9.00	1.375	20.90
21X11X .875/1.125T	59.04	961.2	372.7	8.8	6.6	17.0	30.75	.875	11.00	1.125	20.68
21X12X .875/1.125T	61.21	974.3	395.8	8.9	6.8	16.8	31.88	.875	12.00	1.125	20.68
21X 9X .875/1.500T	61.21	981.9	392.4	9.0	6.9	17.1	31.88	.875	9.00	1.500	21.00
21X10X .875/1.375T	61.69	982.2	398.0	9.0	6.9	17.0	32.13	.875	10.00	1.375	20.90
21X10X .875/1.500T	64.09	988.0	423.1	9.2	7.1	16.9	33.38	.875	10.00	1.500	21.00
21X11X .875/1.375T	64.32	996.3	426.2	9.1	7.2	16.7	33.50	.875	11.00	1.375	20.90
21X11X .875/1.500T	66.97	1011.8	453.0	9.3	7.4	16.6	34.88	.875	11.00	1.500	21.00
24X10X1.000/1.125T	67.68	1095.6	432.8	9.7	7.5	19.1	35.25	1.000	10.00	1.125	26.63
21X13X .875/1.375T	69.60	1020.7	481.9	9.4	7.7	16.2	36.25	.875	13.00	1.375	20.90
24X11X1.000/1.125T	69.85	1111.1	458.2	9.9	7.8	18.9	36.38	1.000	11.00	1.125	26.63
21X12X .875/1.500T	69.85	1024.6	483.4	9.5	7.7	16.3	36.38	.875	12.00	1.500	21.00
24X12X1.000/1.125T	72.00	1125.6	463.9	10.0	8.0	18.6	37.50	1.000	12.00	1.125	26.63
21X14X .875/1.375T	72.25	1031.0	509.2	9.5	7.9	16.0	37.63	.875	14.00	1.375	20.90
24X10X1.000/1.375T	72.48	1133.8	497.0	9.1	8.1	18.8	37.63	1.000	10.00	1.375	26.68
21X13X .875/1.500T	72.73	1035.8	513.2	9.6	8.0	16.0	37.00	.875	13.00	1.500	21.00
24X10X1.000/1.500T	74.88	1150.9	514.0	9.5	8.3	18.7	39.13	1.000	10.00	1.500	27.00
24X11X1.000/1.375T	75.13	1149.6	518.0	10.3	8.3	18.5	39.13	1.000	11.00	1.375	26.68
21X14X .875/1.500T	75.61	1046.2	543.4	9.7	8.2	15.8	39.38	.875	14.00	1.500	21.00
24X11X1.000/1.500T	77.76	1167.0	547.9	10.4	8.6	18.4	40.50	1.000	11.00	1.500	27.00
21X15X .875/1.500T	78.49	1055.5	573.2	9.6	8.4	15.6	40.88	.875	15.00	1.500	21.00
24X10X1.000/1.750T	79.68	1182.7	568.0	10.6	8.8	18.4	41.50	1.000	10.00	1.750	27.25

1.5000 - 1 1/2 in.

1.500 IN. PLATE (AREA= 51.75 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YP	YF	AREA	DEPTH	***** BEAM DIMENSIONS *****		SHEAR AREA
	WT/FT	ZPL	ZFL						WEB	FLANGE	
									THICK	WIDTH	THICK
2X13X1.000/1.375I	80.41	1177.8	580.8	10.6	8.9	16.0	41.88	25.38	1.000	13.00	1.375
2X12X1.000/1.500I	80.64	1181.5	581.8	10.6	8.9	18.1	42.00	25.50	1.000	12.00	1.500
2X16X .875/1.500I	81.37	1064.2	603.3	9.9	8.7	15.3	42.38	22.50	.875	16.00	1.500
2X11X1.000/1.750I	83.04	1198.6	607.3	10.8	9.2	18.1	43.25	25.75	1.000	11.00	1.750
2X14X1.000/1.375I	83.04	1190.0	611.8	10.7	9.1	17.8	43.25	25.38	1.000	14.00	1.375
2X13X1.000/1.500I	83.52	1195.1	616.2	10.7	9.2	17.8	43.50	25.50	1.000	13.00	1.500
2X15X1.000/1.375I	85.69	1200.9	642.4	10.8	9.4	17.5	44.63	25.38	1.000	15.00	1.375
2X12X1.000/1.750I	86.40	1213.1	646.7	10.9	9.5	17.8	45.00	25.75	1.000	12.00	1.750
2X14X1.000/1.500I	86.40	1207.0	649.7	10.9	9.4	17.6	45.00	25.50	1.000	14.00	1.500
2X15X1.000/1.500I	89.28	1218.1	683.5	11.0	9.7	17.3	46.50	25.50	1.000	15.00	1.500
2X13X1.000/1.750I	89.76	1226.2	686.1	11.0	9.8	17.5	46.75	25.75	1.000	13.00	1.750
2X12X1.125/1.375I	90.01	1325.4	656.2	11.5	9.9	20.0	46.88	28.38	1.125	12.00	1.375
2X13X1.125/1.375I	92.64	1340.8	691.2	11.7	10.2	19.7	48.25	28.38	1.125	13.00	1.375
2X12X1.125/1.500I	92.89	1344.6	692.3	11.7	10.2	19.8	48.38	28.50	1.125	12.00	1.500
2X14X1.125/1.750I	93.12	1237.7	724.7	12.55	11.1	17.2	48.50	25.75	1.000	14.00	1.750
2X13X1.125/1.500I	95.29	1354.5	725.1	11.8	10.4	19.5	49.63	28.38	1.125	13.00	1.500
2X15X1.000/1.750I	95.77	1359.8	729.8	11.8	10.5	19.5	49.88	28.50	1.125	14.00	1.750
2X12X1.125/1.750I	96.48	1248.8	764.4	11.3	10.3	16.9	50.25	25.75	1.000	15.00	1.750
2X14X1.125/1.500I	98.65	1379.9	763.9	12.0	10.8	19.5	51.38	28.75	1.125	12.00	1.750
2X15X1.125/1.500I	101.53	1386.6	804.4	12.1	11.0	19.0	52.88	28.50	1.125	15.00	1.500
2X13X1.125/1.750I	102.01	1395.0	807.3	12.1	11.1	19.2	53.13	28.75	1.125	13.00	1.750
2X12X1.125/2.000I	104.41	1411.1	834.1	12.3	11.3	19.2	54.38	29.00	1.125	12.00	2.000
2X14X1.125/1.750I	105.37	1408.7	850.6	12.3	11.4	18.9	54.88	28.75	1.125	14.00	1.750
2X15X1.125/2.000I	108.25	1426.1	893.6	12.4	11.7	18.8	56.38	29.00	1.125	13.00	2.000
3X15X1.250/1.500I	115.20	1563.1	938.4	13.2	12.4	20.6	68.08	31.50	1.250	15.00	1.500
3X16X1.250/1.500I	118.08	1576.8	979.3	13.3	12.6	20.4	61.50	31.50	1.250	16.00	1.500
3X14X1.250/1.750I	119.04	1587.2	987.4	13.3	12.6	20.5	62.00	31.75	1.250	14.00	1.750
3X17X1.250/1.750I	129.12	1628.3	1129.4	13.7	13.6	19.6	67.25	31.75	1.250	17.00	1.750
3X15X1.250/2.000I	129.60	1636.8	1131.1	13.7	13.7	19.8	67.50	32.00	1.250	15.00	2.000
3X16X1.250/2.000I	133.44	1650.4	1195.2	13.8	14.0	19.5	69.50	32.00	1.250	16.00	2.000
3X17X1.375/1.750I	144.25	1822.1	1291.8	14.7	15.0	21.2	75.13	34.75	1.375	17.00	1.750
3X15X1.375/2.000I	144.73	1831.0	1293.6	14.8	15.1	21.4	75.38	35.00	1.375	15.00	2.000
3X16X1.375/2.000I	148.57	1846.6	1351.6	14.9	15.4	21.1	77.38	35.00	1.375	16.00	2.000
3X17X1.375/2.000I	152.41	1861.2	1409.9	14.9	15.7	20.8	79.38	35.00	1.375	17.00	2.000
3X15X1.500/1.750I	157.44	2010.3	1412.8	15.6	16.2	23.1	82.00	37.75	1.500	16.00	1.750
3X16X1.500/1.750I	160.80	2026.7	1466.9	15.7	16.5	22.8	83.75	37.75	1.500	17.00	1.750
3X15X1.500/2.000I	161.28	2035.9	1468.7	15.8	16.6	22.9	84.00	38.00	1.500	15.00	2.000
3X16X1.500/2.000I	165.12	2053.7	1530.9	15.9	16.9	22.6	86.00	38.00	1.500	16.00	2.000

1.5000 - 1 1/2 in.



1.750 IN. PLATE (AREA= 70.44 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			R <sub>e</sub>	Y <sub>P</sub>	Y <sub>F</sub>	***** BEAM DIMENSIONS *****				SHEAR AREA	
WT/FT	ZPL	ZFL	INERTIA	THICK				WIDTH	FLANGE THICK				
3X 2X .125/.188I	1.44	28.9	6.5	26.3	.6	.9	4.0	.75	3.19	.125	2.00	.188	.62
3X 2X .188/.250I	2.04	31.8	7.2	29.3	.6	.9	4.1	1.06	3.25	.188	2.00	.250	.94
3X 2X .188/.313I	2.28	33.9	7.6	31.5	.7	.9	4.1	1.19	3.31	.188	2.00	.313	.95
4X 2X .188/.250I	2.40	39.8	7.4	37.4	.7	.9	5.1	1.25	4.25	.188	2.00	.250	1.13
4X 2X .188/.313I	2.65	42.9	8.0	40.7	.8	.9	5.1	1.38	4.31	.188	2.00	.313	1.14
3X 3X .188/.313I	2.88	38.6	8.9	36.5	.7	.9	4.1	1.50	3.31	.188	3.00	.313	.95
4X 3X .188/.313I	3.24	49.8	9.5	48.3	.8	1.0	5.1	1.69	4.31	.188	3.00	.313	1.14
3X 3X .258/.375I	3.61	42.4	9.8	48.9	.8	1.0	4.2	1.88	3.38	.250	3.00	.375	1.28
3X 3X .258/.438I	3.96	45.2	10.4	44.0	.8	1.0	4.2	2.06	3.44	.250	3.00	.438	1.30
4X 3X .258/.375I	4.09	55.9	10.8	55.5	.9	1.0	5.1	2.13	4.38	.250	3.00	.375	1.53
5X 3X .258/.313I	4.20	66.9	11.2	67.7	1.0	1.0	6.0	2.19	5.31	.250	3.00	.313	1.77
4X 3X .258/.438I	4.44	59.9	11.6	60.3	.9	1.0	5.2	2.31	4.44	.250	3.00	.438	1.55
5X 3X .258/.375I	4.57	72.6	12.2	74.5	1.0	1.0	6.1	2.38	5.38	.250	3.00	.375	1.78
6X 3X .258/.313I	4.68	85.4	12.7	89.3	1.1	1.0	7.0	2.44	6.31	.250	3.00	.313	2.02
5X 3X .258/.438I	4.92	78.2	13.3	81.5	1.1	1.0	6.1	2.56	5.44	.250	3.00	.438	1.80
6X 3X .258/.375I	5.05	92.8	14.0	98.7	1.2	1.1	7.1	2.63	6.38	.250	3.00	.375	2.03
6X 3X .258/.438I	5.48	99.7	15.2	107.8	1.2	1.1	7.1	2.81	6.44	.250	3.00	.438	2.05
6X 4X .258/.375I	5.76	105.6	16.5	116.0	1.3	1.1	7.0	3.00	6.38	.250	4.00	.375	2.03
6X 4X .258/.438I	6.24	114.5	18.2	128.5	1.3	1.1	7.1	3.25	6.44	.250	4.00	.438	2.05
5X 4X .313/.500I	6.84	98.7	17.9	109.7	1.2	1.1	6.1	3.56	5.50	.313	4.00	.500	2.27
7X 4X .313/.375I	7.08	137.0	20.1	160.0	1.5	1.2	8.0	3.69	7.38	.313	4.00	.375	2.86
6X 4X .313/.500I	7.45	126.5	20.8	147.4	1.4	1.2	7.1	3.88	6.50	.313	4.00	.500	2.58
7X 4X .313/.438I	7.56	147.2	22.0	175.8	1.5	1.2	8.0	3.94	7.44	.313	4.00	.438	2.88
6X 4X .313/.563I	7.93	134.5	22.5	159.9	1.5	1.2	7.1	4.13	6.56	.313	4.00	.563	2.68
7X 4X .313/.500I	8.04	157.2	23.9	192.0	1.6	1.2	8.0	4.19	7.50	.313	4.00	.500	2.90
6X 5X .313/.500I	8.41	140.9	24.2	170.6	1.5	1.2	7.0	4.38	6.50	.313	5.00	.500	2.58
7X 4X .313/.563I	8.52	166.9	25.8	208.4	1.7	1.2	8.1	4.44	7.56	.313	4.00	.563	2.91
7X 5X .313/.500I	9.00	174.5	27.8	222.1	1.7	1.3	8.0	4.69	7.50	.313	5.00	.500	2.90
8X 4X .375/.438I	9.12	185.3	26.6	237.4	1.8	1.3	8.9	4.75	8.44	.375	4.00	.438	3.82
7X 5X .313/.563I	9.60	185.4	30.3	242.1	1.8	1.3	8.0	5.00	7.56	.313	5.00	.563	2.91
8X 4X .375/.500I	9.60	196.4	28.8	257.5	1.8	1.3	8.9	5.00	8.50	.375	5.00	.500	3.84
9X 4X .375/.438I	9.85	222.2	30.5	299.8	2.0	1.3	9.8	5.13	9.44	.375	4.00	.438	4.20
8X 4X .375/.563I	10.08	206.9	30.9	277.2	1.9	1.3	9.0	5.25	8.56	.375	4.00	.563	3.87
9X 4X .375/.500I	10.33	234.7	32.9	324.3	2.1	1.4	9.9	5.38	9.50	.375	4.00	.500	4.22
8X 4X .375/.625I	10.56	217.3	33.0	297.7	2.0	1.4	9.0	5.50	8.63	.375	4.00	.625	3.89
7X 6X .313/.563I	10.68	201.7	34.6	274.9	1.9	1.4	7.9	5.56	7.56	.375	6.00	.563	2.91
9X 4X .375/.563I	10.81	246.3	35.2	348.4	2.1	1.4	9.9	5.63	9.56	.375	5.00	.563	4.24
8X 5X .375/.563I	11.16	227.6	35.9	319.6	2.0	1.4	8.9	5.81	8.56	.375	5.00	.563	3.87
9X 5X .375/.500I	11.29	256.1	37.7	370.0	2.2	1.4	9.8	5.88	9.50	.375	5.00	.500	4.22
11.77	239.2	38.6	344.9	2.1	1.4	8.9	6.13	8.63	.375	5.00	.625	3.89	
9X 5X .375/.625I	11.88	269.3	40.7	399.8	2.3	1.5	9.8	6.19	9.56	.375	5.00	.625	3.89
8X 6X .375/.563I	12.25	246.4	40.9	361.8	2.2	1.5	8.8	6.38	8.56	.375	6.00	.563	3.87
9X 5X .375/.625I	12.48	282.1	43.6	429.9	2.4	1.5	9.9	6.50	9.63	.375	5.00	.625	4.27
9X 6X .375/.563I	12.96	290.1	46.2	450.8	2.4	1.6	9.8	6.75	9.56	.375	6.00	.563	4.24
10X 5X .438/.500I	13.21	305.1	44.8	478.2	2.5	1.6	10.7	6.88	10.50	.438	5.00	.500	5.37

1.7500 - 1 3/4 in.

1.750 IN. PLATE (AREA= 70.44 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS			***** BEAM DIMENSIONS *****										SHEAR AREA
WT./FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	THICK	THICK		
9X 6X .375/.625T	13.69	303.8	49.8	2.5	1.6	9.8	7.13	9.63	.375	6.00	.625	.625	4.27		
10X 5X .438/.563T	13.88	319.1	48.1	2.6	1.6	10.7	7.19	10.56	.438	5.00	.563	.563	5.39		
10X 5X .438/.625T	14.40	332.1	51.2	2.7	1.7	10.7	7.50	10.63	.438	5.00	.625	.625	5.42		
8X 6X .438/.688T	14.65	273.2	48.8	2.4	1.6	8.9	7.63	8.69	.438	6.00	.688	.688	4.57		
9X 5X .438/.750T	14.76	309.7	51.4	2.5	1.6	9.9	7.69	9.75	.438	5.00	.750	.750	5.04		
10X 6X .438/.563T	14.88	340.8	54.1	2.7	1.7	10.6	7.75	10.56	.438	6.00	.563	.563	5.39		
10X 5X .438/.688T	15.00	345.1	54.5	2.7	1.7	10.7	7.81	10.69	.438	5.00	.688	.688	5.45		
10X 6X .438/.625T	15.61	355.2	57.9	2.8	1.7	10.6	8.13	10.63	.438	6.00	.625	.625	5.42		
9X 6X .438/.750T	16.20	332.1	58.7	2.7	1.7	9.8	8.44	9.75	.438	6.00	.750	.750	5.04		
10X 6X .438/.688T	16.32	368.7	61.8	2.9	1.8	10.7	8.50	10.69	.438	6.00	.688	.688	5.45		
9X 7X .438/.688T	16.80	339.3	61.8	2.7	1.8	9.7	8.75	9.69	.438	7.00	.688	.688	5.01		
12X 5X .500/.563T	16.92	420.3	62.8	3.1	1.9	12.4	8.81	12.56	.500	5.00	.563	.563	7.16		
10X 6X .438/.750T	17.05	382.2	65.9	3.0	1.8	10.7	8.88	10.75	.438	6.00	.750	.750	5.48		
12X 5X .500/.625T	17.53	435.1	66.7	3.2	1.9	12.5	9.13	12.63	.500	5.00	.625	.625	7.19		
10X 7X .438/.688T	17.64	390.1	69.3	3.0	1.9	10.6	9.19	10.69	.438	7.00	.688	.688	5.45		
12X 6X .500/.563T	18.01	444.5	70.1	3.3	1.9	12.4	9.38	12.56	.500	6.00	.563	.563	7.16		
12X 5X .500/.688T	18.12	449.0	70.5	3.3	2.0	12.5	9.44	12.69	.500	5.00	.688	.688	7.22		
10X 7X .438/.750T	18.49	403.5	73.9	3.1	1.9	10.6	9.63	10.75	.438	7.00	.750	.750	5.48		
12X 6X .500/.625T	18.72	460.3	74.6	3.4	2.0	12.4	9.75	12.63	.500	6.00	.625	.625	7.19		
9X 8X .438/.750T	19.08	369.7	73.3	3.0	1.9	9.6	9.94	9.75	.438	8.00	.750	.750	5.04		
12X 6X .500/.688T	19.45	475.0	79.2	3.5	2.1	12.4	10.13	12.69	.500	6.00	.688	.688	7.22		
12X 5X .500/.875T	19.93	487.3	81.9	3.6	2.1	12.5	10.38	12.88	.500	5.00	.875	.875	7.32		
12X 6X .500/.750T	20.16	489.2	83.8	3.6	2.1	12.4	10.50	12.75	.500	6.00	.750	.750	7.25		
12X 7X .500/.688T	20.76	498.2	87.9	3.6	2.2	12.3	10.81	12.69	.500	7.00	.688	.688	7.22		
12X 7X .500/.750T	21.60	513.4	93.4	3.7	2.2	12.3	11.25	12.75	.500	7.00	.750	.750	7.25		
14X 6X .563/.625T	22.33	571.2	94.5	4.0	2.3	14.1	11.63	14.63	.563	6.00	.625	.625	9.22		
12X 8X .500/.750T	23.04	534.5	102.9	3.9	2.3	12.2	12.00	12.75	.500	8.00	.750	.750	7.25		
14X 6X .563/.688T	23.04	586.5	99.7	4.1	2.4	14.1	12.00	14.69	.563	6.00	.688	.688	9.26		
12X 7X .500/.875T	23.29	540.5	104.1	3.9	2.4	12.3	12.13	12.88	.500	7.00	.875	.875	7.32		
14X 6X .563/.750T	23.77	601.6	105.0	4.2	2.5	14.0	12.38	14.75	.563	6.00	.750	.750	9.29		
14X 7X .563/.688T	24.36	611.6	109.8	4.3	2.5	13.9	12.69	14.69	.563	7.00	.688	.688	9.26		
12X 8X .500/.875T	24.96	562.5	115.2	4.1	2.5	12.1	13.00	12.88	.500	8.00	.875	.875	7.32		
14X 7X .563/.750T	25.21	627.0	116.0	4.4	2.6	13.9	13.13	14.75	.563	7.00	.750	.750	9.29		
12X 7X .563/1.000T	26.40	566.5	117.8	4.1	2.5	12.2	13.75	13.00	.563	7.00	1.000	1.000	8.30		
14X 8X .563/.750T	26.65	649.6	126.9	4.6	2.7	13.8	13.88	14.75	.563	8.00	.750	.750	9.29		
14X 7X .563/.875T	26.88	655.6	128.2	4.6	2.7	13.9	14.00	14.88	.563	7.00	.875	.875	9.36		
12X 8X .563/1.000T	28.32	588.3	130.4	4.3	2.7	12.1	14.75	13.00	.563	8.00	1.000	1.000	8.30		
14X 8X .563/.875T	28.57	679.2	141.0	4.8	2.9	13.8	14.88	14.88	.563	8.00	.875	.875	9.36		
14X 9X .563/.875T	30.24	699.9	153.7	4.9	3.0	13.6	15.75	14.88	.563	9.00	.875	.875	9.36		
14X 8X .625/1.000T	30.49	705.7	155.2	5.0	3.0	13.7	15.88	15.00	.625	8.00	1.000	1.000	9.43		
14X 7X .625/1.125T	31.93	706.6	156.6	5.1	3.1	13.8	16.63	15.13	.625	7.00	1.125	1.125	10.55		
12X 10X .563/1.000T	32.16	624.0	155.4	4.6	2.9	11.8	16.75	13.00	.563	10.00	1.000	1.000	8.30		
14X 9X .563/1.000T	32.41	726.6	169.7	5.1	3.2	13.6	16.88	15.00	.563	9.00	1.000	1.000	9.43		
12X 9X .625/1.125T	33.85	629.5	159.4	4.6	3.0	11.9	17.63	13.13	.625	9.00	1.125	1.125	9.30		
14X 8X .625/1.125T	34.08	729.8	172.8	5.2	3.2	13.6	17.75	15.13	.625	8.00	1.125	1.125	10.55		

1.7500 - 1 3/4 in.



1.750 IN. PLATE (AREA= 70.44 SQ.IN.)

SECTION MODULUS				***** BEAM DIMENSIONS *****										SHEAR	
NOMINAL SIZE	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	WIDTH	THICK	FLANGE	AREA	THICK
16X 7X .688/1.000T	34.56	802.0	174.8	2690.9	5.5	3.4	15.4	18.00	17.00	.688	7.00	1.000	12.90	12.90	1.000
12X10X .625/1.125T	36.00	646.3	173.5	2035.0	4.8	3.1	11.7	18.75	13.13	.625	18.00	1.125	9.30	9.30	1.125
16X 8X .688/1.000T	36.48	826.3	191.0	2909.2	5.7	3.5	15.2	19.00	17.00	.688	8.00	1.000	12.90	12.90	1.000
16X 7X .688/1.250T	37.92	848.7	202.2	3102.2	5.9	3.7	15.3	19.75	17.25	.688	7.00	1.250	13.07	13.07	1.250
16X 9X .688/1.000T	38.40	848.2	207.5	3125.5	5.9	3.7	15.1	20.00	17.00	.688	9.00	1.000	12.90	12.90	1.000
18X 8X .750/.875T	39.36	918.8	209.3	3516.3	6.2	3.8	16.8	20.50	18.88	.750	8.00	.875	15.47	15.47	.875
14X 9X .688/1.250T	40.09	772.2	208.6	2791.7	5.5	3.5	13.4	20.88	15.25	.688	9.00	1.250	11.70	11.70	1.250
16X10X .688/1.000T	40.32	867.6	223.7	3334.4	6.0	3.8	14.9	21.00	17.00	.688	10.00	1.000	12.90	12.90	1.000
16X 9X .688/1.125T	40.57	872.7	224.9	3376.7	6.1	3.9	15.0	21.13	17.13	.688	9.00	1.125	12.99	12.99	1.125
18X 9X .750/.875T	41.05	941.4	225.4	3751.3	6.4	4.0	16.6	21.38	18.88	.750	9.00	.875	15.47	15.47	.875
18X 8X .750/1.000T	41.28	946.8	226.8	3796.4	6.4	4.0	16.7	21.50	19.00	.750	8.00	1.000	15.56	15.56	1.000
16X10X .688/1.125T	42.72	892.5	243.3	3610.0	6.2	4.0	14.8	22.25	17.13	.688	10.00	1.125	12.99	12.99	1.125
18X11X .688/1.125T	44.89	909.7	261.5	3835.1	6.4	4.2	14.7	23.38	17.13	.688	11.00	1.125	12.99	12.99	1.125
18X 9X .750/1.125T	45.37	996.1	264.8	4368.2	6.8	4.4	16.5	23.63	19.13	.750	9.00	1.125	15.66	15.66	1.125
18X11X .750/1.000T	47.04	1009.3	281.5	4567.3	6.9	4.5	16.2	24.50	19.00	.750	11.00	1.000	15.56	15.56	1.000
18X 9X .750/1.250T	47.52	1020.2	284.7	4674.0	7.0	4.6	16.4	24.75	19.25	.750	9.00	1.250	15.75	15.75	1.250
18X11X .750/1.125T	49.69	1035.1	305.3	4923.3	7.1	4.8	16.1	25.88	19.13	.750	11.00	1.125	15.66	15.66	1.125
18X10X .750/1.250T	49.92	1040.8	307.2	4980.8	7.2	4.8	16.2	26.00	19.25	.750	10.00	1.250	15.75	15.75	1.250
18X12X .750/1.125T	51.84	1052.1	325.7	5193.1	7.3	4.9	15.9	27.00	19.13	.750	12.00	1.125	15.66	15.66	1.125
18X11X .750/1.250T	52.32	1059.4	329.8	5281.5	7.4	5.0	16.0	27.25	19.25	.750	11.00	1.250	15.75	15.75	1.250
21X 9X .875/1.125T	54.72	1182.1	335.9	6246.0	7.9	5.3	18.6	28.50	22.13	.875	9.00	1.125	20.90	20.90	1.125
18X 9X .875/1.500T	56.16	1061.8	334.7	5407.5	7.4	5.1	16.2	29.25	19.50	.875	9.00	1.500	18.59	18.59	1.500
21X10X .875/1.125T	56.89	1204.3	358.3	6607.8	8.1	5.5	18.4	29.63	22.13	.875	10.00	1.125	20.90	20.90	1.125
21X 9X .875/1.375T	59.04	1230.9	380.6	7015.3	8.3	5.7	18.4	30.75	22.38	.875	9.00	1.375	21.11	21.11	1.375
21X11X .875/1.125T	59.04	1224.5	382.5	6960.1	8.3	5.7	18.2	30.75	22.13	.875	11.00	1.125	20.90	20.90	1.125
21X12X .875/1.125T	61.21	1243.3	406.2	7311.2	8.5	5.9	18.0	31.88	22.13	.875	12.00	1.125	20.90	20.90	1.125
21X 9X .875/1.500T	61.21	1252.8	403.0	7394.4	8.5	5.9	18.3	31.88	22.50	.875	9.00	1.500	21.22	21.22	1.500
21X10X .875/1.375T	61.69	1253.7	409.3	7445.5	8.5	5.9	18.2	32.13	22.38	.875	10.00	1.375	21.11	21.11	1.375
21X10X .875/1.500T	64.09	1275.9	434.4	7858.6	8.7	6.2	18.1	33.38	22.50	.875	10.00	1.500	21.22	21.22	1.500
21X11X .875/1.375T	64.32	1273.9	437.5	7858.6	8.7	6.2	18.0	33.50	22.38	.875	11.00	1.375	21.11	21.11	1.375
21X11X .875/1.500T	66.97	1295.8	465.0	8298.8	8.9	6.4	17.8	34.88	22.50	.875	11.00	1.500	21.22	21.22	1.500
21X10X1.000/1.125T	67.68	1395.2	445.6	9077.9	9.3	6.5	20.4	35.25	25.13	1.000	10.00	1.125	26.88	26.88	1.125
21X13X .875/1.375T	69.60	1309.3	494.5	8661.6	9.0	6.6	17.5	36.25	22.38	.875	13.00	1.375	21.11	21.11	1.375
21X11X1.000/1.125T	69.85	1416.6	471.7	9511.7	9.4	6.7	20.2	36.38	25.13	1.000	11.00	1.125	26.88	26.88	1.125
21X12X .875/1.500T	69.85	1314.4	496.2	8735.7	9.0	6.6	17.6	36.38	22.50	.875	12.00	1.500	21.22	21.22	1.500
21X12X1.000/1.125T	72.00	1436.7	497.9	9939.7	9.6	6.9	20.0	37.50	25.13	1.000	12.00	1.125	26.88	26.88	1.125
21X14X .875/1.375T	72.25	1324.1	522.5	9040.7	9.1	6.8	17.3	37.63	22.38	.875	14.00	1.375	21.11	21.11	1.375
21X10X1.000/1.375T	72.48	1447.4	501.3	10101.9	9.7	7.0	20.2	37.75	25.38	1.000	10.00	1.375	27.13	27.13	1.375
21X13X .875/1.500T	72.73	1330.7	526.8	9152.0	9.2	6.9	17.4	37.88	22.50	.875	13.00	1.500	21.22	21.22	1.500
21X10X1.000/1.500T	74.88	1470.9	529.1	10604.3	9.8	7.2	20.0	39.00	25.38	1.000	10.00	1.500	27.25	27.25	1.500
21X11X1.000/1.375T	75.13	1469.4	533.2	10613.8	9.8	7.2	19.9	39.13	25.38	1.000	11.00	1.375	27.13	27.13	1.375
21X14X .875/1.500T	75.61	1345.8	557.8	9562.8	9.3	7.1	17.1	39.38	22.50	.875	14.00	1.500	21.22	21.22	1.500
21X11X1.000/1.500T	77.76	1493.2	563.9	11154.4	10.0	7.5	19.8	40.50	25.50	1.000	11.00	1.500	27.25	27.25	1.500
21X15X .875/1.500T	78.49	1359.4	588.4	9958.4	9.5	7.3	16.9	40.88	22.50	.875	15.00	1.500	21.22	21.22	1.500
21X10X1.000/1.750T	79.68	1514.4	594.8	11602.2	10.2	7.7	19.8	41.50	25.75	1.000	10.00	1.750	27.50	27.50	1.750

1.7500 - 1 3/4 in.

AD-A048 989

DAVID W TAYLOR NAVAL SHIP RESEARCH AND DEVELOPMENT CE--ETC F/G 11/6  
PROPERTIES OF COMBINED BEAM AND PLATE FOR HIGH-STRENGTH STEELS --ETC(U)  
DEC 77 S F ZEMANEK, N S NAPPI

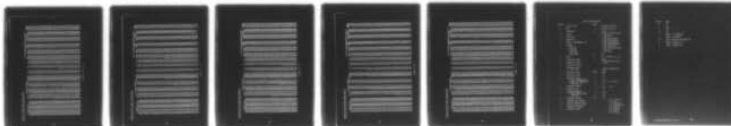
UNCLASSIFIED

DTNSRDC-77-0069

NL

5 OF 5

AD  
A048989



END  
DATE  
FILMED

2-78

DDC

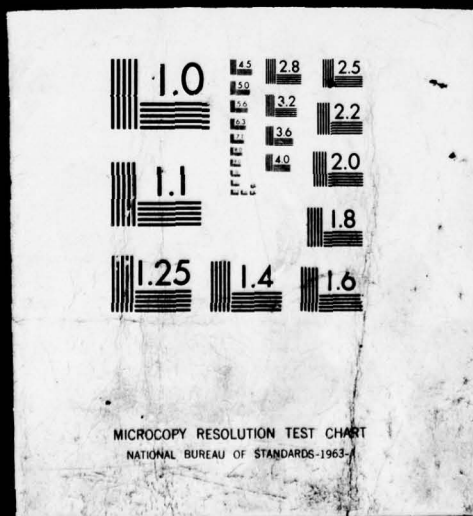


SIFTED

5 OF 5

AD

A048989



1.750 IN. PLATE (AREA= 70.44 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS				***** BEAM DIMENSIONS *****				FLANGE		SHEAR AREA		
	WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK		WIDTH	THICK
24X13X1.000/1.375T	80.41	1508.8	597.6	11612.7	10.2	7.7	19.4	41.88	25.38	1.000	13.00	1.375	27.13
24X12X1.000/1.500T	80.64	1513.6	598.7	11690.5	10.2	7.7	19.5	42.00	25.50	1.000	12.00	1.500	27.25
21X16X.075/1.500T	81.37	1372.1	619.2	10346.7	9.6	7.5	16.7	42.38	22.50	.075	16.00	1.500	21.22
24X11X1.000/1.750T	83.04	1536.7	625.2	12221.1	10.4	8.0	19.5	43.25	25.75	1.000	11.00	1.750	27.50
24X14X1.000/1.375T	83.04	1525.9	629.4	12088.5	10.3	7.9	19.2	43.25	25.38	1.000	14.00	1.375	27.13
24X13X1.000/1.500T	83.52	1532.6	634.0	12221.2	10.4	8.0	19.3	43.50	25.50	1.000	13.00	1.500	27.25
24X15X1.000/1.375T	85.69	1541.2	660.8	12548.0	10.4	8.1	19.0	44.63	25.38	1.000	15.00	1.375	27.13
24X12X1.000/1.750T	86.40	1557.0	665.8	12824.6	10.5	8.2	19.3	45.80	25.75	1.000	12.00	1.750	27.50
24X14X1.000/1.500T	86.40	1549.3	668.5	12725.2	10.5	8.2	19.0	45.00	25.50	1.000	14.00	1.500	27.25
24X15X1.000/1.500T	89.28	1565.0	703.2	13221.3	10.6	8.4	18.8	46.50	25.50	1.000	15.00	1.500	27.25
24X13X1.000/1.750T	89.76	1575.5	706.3	13411.2	10.7	8.5	19.0	46.75	25.75	1.000	13.00	1.750	27.50
27X12X1.125/1.375T	90.01	1691.9	677.3	14573.1	11.1	8.6	21.5	46.88	28.38	1.125	12.00	1.375	33.90
27X13X1.125/1.375T	92.64	1712.8	713.2	15170.8	11.3	8.9	21.3	48.25	28.38	1.125	13.00	1.375	33.90
27X12X1.125/1.500T	92.89	1717.7	714.5	15264.1	11.3	8.9	21.4	48.38	28.50	1.125	12.00	1.500	34.03
24X14X1.000/1.750T	93.12	1591.7	746.0	13968.1	10.8	8.8	18.7	48.50	25.75	1.000	14.00	1.750	27.50
27X14X1.125/1.750T	95.29	1731.4	748.1	15739.0	11.4	9.1	21.0	49.63	28.38	1.125	14.00	1.750	33.90
27X13X1.125/1.500T	95.77	1738.4	753.1	15894.8	11.5	9.1	21.1	49.88	28.50	1.125	13.00	1.500	34.03
24X15X1.000/1.750T	96.48	1607.4	786.9	14527.2	11.0	9.0	18.5	50.25	25.75	1.000	15.00	1.750	27.50
27X12X1.125/1.750T	98.65	1765.0	788.5	16622.8	11.7	9.4	21.1	51.38	28.75	1.125	12.00	1.750	34.31
27X13X1.125/1.500T	101.53	1774.8	829.9	17105.2	11.8	9.6	20.6	52.88	28.50	1.125	15.00	1.500	34.03
27X14X1.125/1.750T	102.01	1785.6	833.3	17328.1	11.8	9.7	20.8	53.13	28.75	1.125	13.00	1.750	34.31
27X12X1.125/2.000T	104.41	1806.8	861.3	17935.0	12.0	9.9	20.8	54.38	29.00	1.125	12.00	2.000	34.59
27X13X1.125/2.000T	105.37	1804.4	877.8	18010.9	12.0	10.0	20.5	54.88	28.75	1.125	14.00	1.750	34.31
30X13X1.250/1.500T	108.25	1827.4	912.4	18712.7	12.1	10.2	20.5	56.38	29.00	1.125	13.00	2.000	34.59
30X15X1.250/1.500T	115.20	1991.6	970.7	21699.9	12.9	10.9	22.4	60.00	31.50	1.250	15.00	1.500	41.56
30X16X1.250/1.500T	118.08	2009.8	1012.8	22392.5	13.0	11.1	22.1	61.50	31.50	1.250	16.00	1.500	41.56
30X14X1.250/1.750T	119.04	2023.0	1021.8	22742.2	13.1	11.2	22.3	62.00	31.75	1.250	14.00	1.750	41.88
30X15X1.250/2.000T	129.12	2077.7	1168.4	25052.4	13.5	12.1	21.4	67.25	31.75	1.250	17.00	1.750	41.88
30X16X1.250/2.000T	129.60	2088.4	1170.6	25317.4	13.5	12.1	21.6	67.50	32.00	1.250	15.00	2.000	42.19
33X17X1.375/1.750T	144.25	2311.2	1339.7	26163.5	13.7	12.4	21.3	69.50	32.00	1.250	16.00	2.000	42.19
33X15X1.375/2.000T	144.73	2322.2	1342.1	30257.5	14.6	13.4	23.1	75.13	34.75	1.375	17.00	1.750	50.19
33X16X1.375/2.000T	148.57	2342.5	1402.2	32234.7	14.8	13.8	23.0	77.38	35.00	1.375	15.00	2.000	50.53
33X17X1.375/2.000T	152.41	2361.6	1462.5	33192.4	14.9	14.1	22.7	79.38	35.00	1.375	17.00	2.000	50.53
36X16X1.500/1.750T	157.44	2533.3	1469.0	36727.3	15.5	14.5	25.0	82.00	37.75	1.500	16.00	1.750	59.25
36X17X1.500/1.750T	160.80	2554.2	1524.9	37716.3	15.6	14.8	24.7	83.75	37.75	1.500	17.00	1.750	59.25
36X15X1.500/2.000T	161.28	2565.5	1527.5	38057.6	15.7	14.8	24.9	84.00	38.00	1.500	15.00	2.000	59.63
36X16X1.500/2.000T	165.12	2588.2	1591.9	39179.8	15.8	15.1	24.6	86.00	39.00	1.500	16.00	2.000	59.63

1.7500 - 1 3/4 in.



2.000 IN. PLATE (AREA= 92.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		***** BEAM DIMENSIONS *****		SHEAR AREA						
WT/FT	ZPL	ZFL	INERTIA	R	YP	YF	AREA	DEPTH	WEB THICK	FLANGE WIDTH	THICK	
9X 6X .375/ .625T	13.69	330.5	51.9	2.3	1.6	10.1	7.13	9.63	.375	6.00	.625	4.36
10X 5X .438/ .563T	13.80	346.6	50.0	2.4	1.6	11.0	7.19	10.56	.438	5.00	.563	5.50
10X 5X .438/ .625T	14.40	362.0	53.2	2.4	1.6	11.0	7.50	10.63	.438	5.00	.625	5.53
8X 6X .438/ .688T	14.65	298.1	51.0	2.2	1.6	9.1	7.63	8.69	.438	6.00	.688	4.68
9X 5X .438/ .750T	14.76	338.2	53.6	2.3	1.6	10.1	7.69	9.75	.438	5.00	.750	5.15
10X 6X .438/ .563T	14.88	372.5	56.1	2.5	1.6	10.9	7.75	10.56	.438	6.00	.563	5.50
10X 5X .438/ .688T	15.00	377.5	56.6	2.5	1.7	11.0	7.71	10.69	.438	5.00	.688	5.56
10X 6X .438/ .625T	15.61	390.0	60.1	2.6	1.7	10.9	8.13	10.63	.438	6.00	.625	5.53
9X 6X .438/ .750T	16.20	365.7	61.0	2.5	1.7	10.1	8.44	9.75	.438	6.00	.750	5.15
10X 6X .438/ .688T	16.32	406.6	64.0	2.6	1.7	11.0	8.50	10.69	.438	6.00	.688	5.56
9X 7X .438/ .688T	16.80	374.7	64.1	2.5	1.7	10.0	8.75	9.69	.438	7.00	.688	5.12
12X 5X .500/ .563T	16.92	464.3	64.9	2.9	1.8	12.8	8.81	12.56	.500	5.00	.563	7.28
10X 6X .438/ .750T	17.05	423.3	68.2	2.7	1.8	11.0	8.88	10.75	.438	6.00	.750	5.50
12X 5X .500/ .625T	17.53	482.5	68.9	3.0	1.8	12.8	9.13	12.63	.500	5.00	.625	7.32
10X 7X .438/ .688T	17.64	433.4	71.6	2.8	1.8	10.9	9.19	10.69	.438	7.00	.688	5.56
12X 6X .500/ .563T	18.01	494.3	72.3	3.0	1.9	12.7	9.38	12.56	.500	6.00	.563	7.20
12X 5X .500/ .688T	18.12	499.8	72.7	3.0	1.9	12.8	9.44	12.69	.500	5.00	.688	7.35
10X 7X .438/ .750T	18.49	450.4	76.3	2.9	1.8	10.9	9.63	10.75	.438	7.00	.750	5.50
12X 6X .500/ .625T	18.72	514.1	76.9	3.1	1.9	12.7	9.75	12.63	.500	6.00	.625	7.32
9X 8X .438/ .750T	19.08	413.1	75.9	2.7	1.8	9.9	9.94	9.75	.438	6.00	.750	5.15
12X 6X .500/ .688T	19.45	532.6	81.5	3.2	2.0	12.7	10.13	12.69	.500	6.00	.688	7.35
12X 5X .500/ .875T	19.93	547.9	84.3	3.3	2.0	12.9	10.38	12.88	.500	5.00	.875	7.44
12X 6X .500/ .750T	20.16	550.7	86.2	3.3	2.0	12.8	10.50	12.75	.500	6.00	.750	7.30
12X 7X .500/ .688T	20.76	562.4	90.3	3.3	2.0	12.7	10.81	12.69	.500	7.00	.688	7.35
12X 7X .500/ .750T	21.60	582.1	96.0	3.4	2.1	12.7	11.25	12.75	.500	7.00	.750	7.30
14X 6X .563/ .625T	22.33	648.9	97.0	3.7	2.2	14.5	11.63	14.63	.563	6.00	.625	9.36
12X 8X .500/ .750T	23.04	610.0	105.5	3.6	2.2	12.6	12.00	12.75	.500	8.00	.750	7.30
14X 6X .563/ .688T	23.84	668.6	102.3	3.8	2.2	14.5	12.00	14.69	.563	6.00	.688	9.40
12X 7X .500/ .875T	23.29	617.4	106.8	3.6	2.2	12.7	12.13	12.88	.500	7.00	.875	7.44
14X 6X .563/ .750T	23.77	688.2	107.7	3.9	2.3	14.5	12.38	14.75	.563	6.00	.750	9.43
14X 7X .563/ .688T	24.36	701.5	112.6	3.9	2.3	14.5	12.69	14.69	.563	7.00	.688	9.40
24.96	647.0	118.1	1405.6	3.8	2.3	12.6	13.00	12.88	.500	8.00	.875	7.44
12X 8X .500/ .875T	25.21	721.7	110.8	4.0	2.4	14.4	13.13	14.75	.563	7.00	.750	9.43
14X 7X .563/ .750T	26.48	653.3	120.8	4.0	2.3	12.7	13.75	13.88	.563	7.00	1.000	8.45
14X 8X .563/ .750T	26.55	751.9	129.9	4.2	2.5	14.3	13.88	14.75	.563	8.00	.750	9.43
14X 7X .563/ .875T	26.88	759.5	131.2	4.2	2.5	14.4	14.00	14.88	.563	7.00	.875	9.50
28.32	682.9	133.6	1676.5	4.0	2.5	12.5	14.75	13.88	.563	8.00	1.000	8.45
14X 8X .563/ .875T	28.57	791.5	144.2	4.4	2.6	14.3	14.88	14.88	.563	8.00	.875	9.50
30.24	820.0	157.0	2224.7	4.5	2.7	14.2	15.75	14.88	.563	9.00	.875	9.50
14X 9X .563/ .875T	30.49	827.5	158.6	4.6	2.7	14.3	15.88	15.88	.563	8.00	1.000	9.57
14X 8X .563/ 1.000T	31.93	829.5	160.2	4.6	2.8	14.4	16.63	15.13	.563	7.00	1.125	10.71
12X 10X .563/ 1.000T	32.16	732.6	159.0	4.2	2.7	12.3	16.75	13.88	.563	10.00	1.000	8.45
14X 9X .563/ 1.000T	32.41	856.6	173.3	4.7	2.9	14.1	16.88	15.00	.563	9.00	1.000	9.57
33.05	740.6	163.2	2450.1	4.3	2.7	12.4	17.63	13.13	.625	9.00	1.125	9.46
14X 8X .625/ 1.125T	34.08	861.8	176.6	4.8	2.9	14.2	17.75	15.13	.625	8.00	1.125	10.71

2.0000 - 2 in.

2.000 IN. PLATE (AREA= 92.00 SQ.IN.)

NOMINAL SIZE	SECTION MODULUS			R	YF	AREA	DEPTH	BEAM DIMENSIONS			SHEAR AREA
	WT/FT	ZPL	ZFL					WEB THICK	FLANGE WIDTH	FLANGE THICK	
24X13X1.000/1.375T	88.41	1863.2	611.1	9.7	6.8	20.6	25.38	1.000	13.00	1.375	27.30
24X12X1.000/1.500T	80.64	1869.2	612.4	9.7	6.8	20.7	25.50	1.000	12.00	1.500	27.50
21X16X .875/1.500T	81.37	1701.8	632.2	9.2	6.6	17.9	22.50	.875	16.00	1.500	21.44
24X11X1.000/1.750T	83.04	1899.9	639.6	9.9	7.0	20.8	25.75	1.000	11.00	1.750	27.75
24X14X1.000/1.375T	83.04	1886.6	643.5	9.9	7.0	20.4	25.38	1.000	14.00	1.375	27.38
24X13X1.000/1.500T	83.52	1895.3	648.4	9.9	7.0	20.5	25.50	1.000	13.00	1.500	27.50
24X15X1.000/1.375T	85.69	1907.8	675.6	10.0	7.2	20.2	25.38	1.000	15.00	1.375	27.38
24X12X1.000/1.750T	86.40	1927.8	681.0	10.1	7.2	20.5	25.75	1.000	12.00	1.750	27.75
24X14X1.000/1.500T	86.40	1918.3	683.5	10.1	7.2	20.3	25.50	1.000	14.00	1.500	27.50
24X15X1.000/1.500T	89.28	1939.9	719.0	10.2	7.4	20.3	25.50	1.000	15.00	1.500	27.50
27X12X1.000/1.750T	89.76	1953.2	722.5	10.3	7.5	20.3	25.75	1.000	13.00	1.750	27.75
27X12X1.125/1.375T	90.01	2088.3	694.2	10.7	7.6	22.8	28.38	1.125	12.00	1.375	34.18
27X13X1.000/1.750T	92.64	2116.2	730.8	10.8	7.8	22.6	28.38	1.125	13.00	1.750	34.31
27X12X1.125/1.500T	92.89	2122.3	732.2	10.9	7.8	22.7	28.50	1.125	12.00	1.500	34.31
24X14X1.000/1.750T	93.12	1975.7	763.0	10.4	7.7	20.8	25.75	1.000	14.00	1.750	27.75
27X14X1.125/1.375T	95.29	2141.0	766.4	11.0	8.0	22.4	28.38	1.125	14.00	1.375	34.18
27X13X1.125/1.500T	95.77	2149.9	771.7	11.0	8.1	22.4	28.50	1.125	13.00	1.500	34.31
24X15X1.000/1.750T	96.48	1997.4	804.8	10.6	8.0	19.8	25.75	1.000	15.00	1.750	27.75
27X12X1.125/1.750T	98.65	2184.7	888.1	11.2	8.3	22.4	28.75	1.125	12.00	1.750	34.59
27X15X1.125/1.500T	101.53	2198.8	858.1	11.4	8.5	22.0	28.50	1.125	15.00	1.500	34.31
102.01	2212.4	853.9	1094.5	11.4	8.6	22.2	28.75	1.125	13.00	1.750	34.59
27X12X1.125/2.000T	104.41	2240.0	882.9	11.6	8.8	22.2	29.00	1.125	12.00	2.000	34.88
27X14X1.125/1.750T	105.37	2237.7	899.5	11.6	8.8	21.9	28.75	1.125	14.00	1.750	34.59
27X13X1.125/2.000T	108.25	2267.7	935.2	11.8	9.1	21.9	29.00	1.125	13.00	2.000	34.88
30X15X1.250/1.500T	115.20	2463.5	996.6	12.5	9.6	23.9	31.50	1.250	15.00	1.500	41.88
30X16X1.250/1.500T	118.08	2487.5	1039.6	12.6	9.9	23.6	31.50	1.250	16.00	1.500	41.88
30X14X1.250/1.750T	119.04	2503.9	1049.2	12.7	10.0	23.8	31.75	1.250	14.00	1.750	42.19
30X17X1.250/1.750T	129.12	2576.2	1199.3	13.2	10.7	23.8	31.75	1.250	17.00	1.750	42.19
30X15X1.250/2.000T	129.63	2599.4	1202.1	13.2	10.8	23.2	32.00	1.250	15.00	2.000	42.50
30X16X1.250/2.000T	133.44	2613.4	1259.5	13.4	11.1	22.9	32.00	1.250	16.00	2.000	42.50
33X17X1.375/1.750T	144.25	2896.5	1370.1	14.3	12.0	24.8	34.75	1.375	17.00	1.750	50.53
33X15X1.375/2.000T	144.73	2878.0	1381.8	14.3	12.0	25.0	35.00	1.375	15.00	2.000	50.88
33X16X1.375/2.000T	148.57	2896.3	1442.7	14.5	12.3	24.7	35.00	1.375	16.00	2.000	50.88
33X17X1.375/2.000T	152.41	2921.8	1504.7	14.6	12.6	24.4	35.00	1.375	17.00	2.000	50.88
36X16X1.500/1.750T	157.44	3118.5	1514.4	15.3	13.0	26.8	37.75	1.500	16.00	1.750	59.63
36X17X1.500/1.750T	160.80	3144.9	1571.9	15.4	13.2	26.5	37.75	1.500	17.00	1.750	59.63
36X15X1.500/2.000T	161.28	3158.8	1575.0	15.5	13.3	26.7	38.00	1.500	15.00	2.000	60.00
36X16X1.500/2.000T	165.12	3187.5	1641.3	15.6	13.6	26.4	38.00	1.500	16.00	2.000	60.00

2.0000 - 2 in.



2.000 IN. PLATE (AREA= 92.00 SQ.IN.)

NOMINAL SIZE		SECTION MODULUS		R	VP	VF	DIMENSIONS		SHEAR AREA
WT/FT	ZPL	ZFL	INERTIA				DEPTH	THICK WEB	FLANGE THICK
3X 2X .125/ .100T	1.44	30.5	9.5	.7	1.0	4.2	.75	.125	2.00
3X 2X .100/ .250T	2.04	41.4	10.2	.7	1.0	4.2	1.06	.100	.250
3X 2X .100/ .313T	2.28	43.3	10.6	.7	1.0	4.3	1.19	.100	.313
4X 2X .100/ .250T	2.48	48.8	9.9	.7	1.1	5.2	1.25	.100	.250
4X 2X .100/ .313T	2.65	51.8	10.4	.8	1.1	5.3	1.38	.100	.313
3X 3X .100/ .313T	2.88	47.0	11.9	.7	1.1	4.3	1.58	.100	.313
4X 3X .100/ .313T	3.24	58.4	12.0	.8	1.1	5.2	1.69	.100	.313
3X 3X .250/ .375T	3.61	51.6	12.8	.8	1.1	4.3	2.06	.250	.375
3X 3X .250/ .438T	3.96	54.4	13.4	.8	1.1	4.4	2.13	.250	.438
4X 3X .250/ .375T	4.09	64.5	13.4	.9	1.1	5.3	2.19	.250	.375
5X 3X .250/ .313T	4.20	75.0	13.4	.9	1.1	6.2	2.31	.250	.313
4X 3X .250/ .438T	4.44	68.5	14.2	.9	1.1	5.3	2.31	.250	.438
5X 3X .375/ .375T	4.57	80.7	14.4	1.0	1.1	6.3	2.30	.375	.375
6X 3X .250/ .313T	4.68	93.0	14.7	1.1	1.1	7.2	2.44	.250	.313
6X 3X .250/ .438T	4.92	86.2	15.5	1.1	1.1	6.3	2.56	.250	.438
6X 3X .375/ .375T	5.05	100.4	16.0	1.1	1.1	7.2	2.63	.375	.375
6X 3X .375/ .438T	5.48	107.4	17.2	1.1	1.2	7.3	2.81	.375	.438
6X 4X .250/ .375T	5.76	113.5	18.5	1.2	1.2	7.2	3.00	.250	.375
6X 4X .250/ .438T	6.24	122.7	20.2	1.2	1.2	7.2	3.25	.250	.438
5X 4X .313/ .500T	6.84	107.5	20.2	1.2	1.2	6.3	3.56	.313	.500
7X 4X .313/ .375T	7.08	145.7	22.0	1.4	1.2	8.1	3.69	.313	.375
6X 4X .313/ .500T	7.45	135.5	22.9	1.3	1.2	7.3	3.88	.313	.500
7X 4X .313/ .438T	7.56	156.5	23.9	1.4	1.3	8.2	3.96	.313	.438
6X 4X .313/ .563T	7.93	144.0	24.6	1.4	1.2	7.3	4.13	.313	.563
7X 4X .313/ .500T	8.04	167.1	25.9	1.5	1.3	8.2	4.19	.313	.500
6X 5X .313/ .500T	8.41	151.0	26.4	1.4	1.3	7.2	4.30	.313	.500
7X 4X .313/ .563T	8.52	177.6	27.8	1.5	1.3	8.3	4.44	.313	.563
7X 5X .313/ .500T	9.08	186.0	29.9	1.6	1.3	8.2	4.69	.313	.500
8X 4X .375/ .438T	9.12	196.8	28.5	1.6	1.3	9.1	4.75	.375	.438
7X 5X .313/ .563T	9.60	198.0	32.3	1.7	1.3	8.2	5.00	.313	.563
8X 4X .375/ .500T	9.60	209.0	30.7	1.7	1.3	9.2	5.00	.375	.500
8X 4X .375/ .563T	9.85	236.1	32.3	1.8	1.4	10.1	5.13	.375	.563
9X 4X .375/ .500T	10.08	220.6	32.9	1.8	1.4	9.2	5.25	.375	.500
8X 4X .375/ .563T	10.33	250.4	34.7	1.9	1.4	10.1	5.38	.375	.563
9X 4X .375/ .563T	10.56	232.3	35.0	1.8	1.4	9.2	5.50	.375	.563
9X 6X .313/ .563T	10.68	216.6	36.8	1.8	1.4	8.2	5.56	.313	.563
9X 5X .375/ .563T	10.81	263.2	37.1	2.0	1.4	10.1	5.63	.375	.563
9X 5X .375/ .500T	11.16	244.0	39.6	1.9	1.4	9.1	5.81	.375	.500
9X 5X .375/ .563T	11.29	274.4	40.7	2.0	1.5	10.0	5.80	.375	.563
9X 5X .375/ .563T	11.77	257.4	40.7	2.0	1.4	9.2	6.13	.375	.563
9X 6X .375/ .563T	11.88	289.7	42.6	2.1	1.5	10.1	6.19	.375	.563
9X 5X .375/ .563T	12.25	265.9	43.0	2.0	1.5	9.1	6.38	.375	.563
9X 5X .375/ .563T	12.48	304.5	45.6	2.2	1.5	10.1	6.50	.375	.563
9X 6X .375/ .563T	12.96	314.1	48.3	2.2	1.5	10.0	6.75	.375	.563
10X 5X .438/ .500T	13.21	330.0	46.7	2.3	1.6	10.9	6.88	.438	.500

2.0000 - 2 in.

2.000 IN. PLATE (AREA= 92.00 SQ.IN.)

NOMINAL SIZE	WT/FT	SECTION MODULUS		INERTIA	R	YP	VF	AREA	DEPTH	***** BEAM DIMENSIONS *****			SHEAR AREA
		ZPL	ZFL							THICK	WIDTH	FLANGE THICK	
16X 7X .688/1.000T	34.56	947.6	178.7	2856.3	5.1	3.0	16.0	18.00	17.00	.688	7.00	1.000	13.07
12X10X .625/1.125T	36.00	764.3	175.5	2179.8	4.4	2.9	12.3	18.75	13.13	.625	10.00	1.125	9.46
16X 8X .688/1.000T	36.40	980.0	195.2	3092.8	5.3	3.2	15.0	19.00	17.00	.688	8.00	1.000	13.07
16X 7X .688/1.250T	37.92	1010.9	206.5	3381.3	5.4	3.3	16.0	19.75	17.25	.688	7.00	1.250	13.24
16X 9X .688/1.000T	38.40	1011.2	211.9	3328.1	5.5	3.3	15.7	20.00	17.00	.688	9.00	1.000	13.07
10X 8X .758/ .875T	39.36	1095.9	213.8	3736.1	5.8	3.4	17.5	20.50	18.00	.758	8.00	.875	15.66
14X 9X .688/1.250T	40.09	921.8	213.2	2906.7	5.1	3.2	14.0	20.00	15.25	.688	9.00	1.250	11.87
16X10X .688/1.000T	40.32	1030.3	220.3	3556.4	5.6	3.4	15.6	21.00	17.00	.688	10.00	1.000	13.07
16X 9X .688/1.125T	40.57	1045.0	229.7	3601.8	5.6	3.4	15.7	21.13	17.13	.688	9.00	1.125	13.16
10X 9X .758/ .875T	41.05	1126.8	238.2	3991.0	5.9	3.5	17.3	21.30	18.00	.758	9.00	.875	15.66
10X 8X .758/1.000T	41.20	1133.7	231.7	4039.4	6.0	3.6	17.4	21.50	19.00	.758	8.00	1.000	15.75
16X10X .688/1.125T	42.72	1072.8	248.4	3857.9	5.8	3.6	15.5	22.25	17.13	.688	10.00	1.125	13.16
16X11X .688/1.125T	44.09	1097.4	266.0	4106.3	6.0	3.7	15.4	23.30	17.13	.688	11.00	1.125	13.16
10X 9X .758/1.125T	45.37	1201.4	278.3	4663.1	6.4	3.9	17.2	23.63	19.13	.758	9.00	1.125	15.85
10X11X .758/1.000T	47.84	1220.4	290.6	4998.0	6.5	4.0	17.6	24.50	19.00	.758	11.00	1.000	15.75
10X 9X .758/1.250T	47.52	1234.6	280.6	4998.0	6.5	4.0	17.2	24.75	19.25	.758	9.00	1.250	15.94
10X11X .758/1.125T	49.69	1256.2	311.5	5274.6	6.7	4.2	18.9	25.00	19.13	.758	11.00	1.125	15.85
10X10X .758/1.250T	49.92	1263.6	313.4	5336.8	6.7	4.2	17.0	26.00	19.25	.758	10.00	1.250	15.94
10X12X .758/1.125T	51.84	1280.3	332.2	5573.7	6.8	4.4	16.8	27.00	19.13	.758	12.00	1.125	15.85
10X11X .758/1.250T	52.32	1290.8	336.4	5670.4	6.9	4.4	16.9	27.25	19.25	.758	11.00	1.250	15.94
21X 9X .875/1.125T	54.72	1430.1	343.2	6606.4	7.4	4.6	19.5	28.50	22.13	.875	9.00	1.125	21.11
21X10X .875/1.125T	56.16	1293.0	342.1	5815.7	6.9	4.5	17.8	29.25	19.50	.875	9.00	1.500	18.81
21X10X .875/1.125T	56.09	1460.6	367.0	7805.4	7.6	4.8	19.3	29.63	22.13	.875	10.00	1.125	21.11
21X 9X .875/1.375T	59.04	1584.2	388.9	7533.5	7.8	5.0	19.4	30.75	22.38	.875	9.00	1.375	21.33
21X11X .875/1.125T	59.04	1496.4	390.7	7475.4	7.8	5.0	19.1	30.75	22.13	.875	11.00	1.125	21.11
21X12X .875/1.125T	61.21	1522.4	414.0	7865.6	8.0	5.2	19.8	31.00	22.13	.875	12.00	1.125	21.11
21X 9X .875/1.500T	61.21	1534.0	411.7	7953.1	8.0	5.2	19.3	31.88	22.50	.875	9.00	1.500	21.44
21X10X .875/1.375T	61.69	1535.8	418.1	8011.7	8.0	5.2	19.2	32.13	22.38	.875	10.00	1.375	21.33
21X10X .875/1.500T	64.09	1566.1	443.7	8478.8	8.2	5.4	19.1	33.38	22.50	.875	10.00	1.500	21.44
21X11X .875/1.375T	64.32	1564.0	446.8	8473.1	8.2	5.4	19.0	33.50	22.38	.875	11.00	1.375	21.33
21X11X .875/1.500T	66.97	1594.8	474.9	8964.6	8.4	5.6	18.9	34.00	22.50	.875	11.00	1.500	21.44
24X10X1.000/1.125T	67.68	1709.8	456.0	9768.6	8.8	5.7	21.4	35.25	25.13	1.000	10.00	1.125	27.13
21X13X .875/1.125T	69.60	1613.5	504.9	9375.6	8.6	5.8	18.6	36.25	22.38	.875	13.00	1.375	21.33
24X11X1.000/1.125T	69.85	1738.8	482.6	10248.2	8.9	5.9	21.2	36.38	25.13	1.000	11.00	1.125	27.13
21X12X .875/1.500T	69.85	1620.1	506.7	9456.8	8.6	5.8	18.7	36.38	22.50	.875	12.00	1.500	21.44
24X12X1.000/1.125T	72.00	1765.9	509.3	10725.1	9.1	6.1	21.1	37.50	25.13	1.000	12.00	1.125	27.13
21X14X .875/1.375T	72.25	1634.5	533.4	9804.9	8.7	6.0	18.4	37.63	22.38	.875	14.00	1.375	21.33
24X10X1.000/1.375T	72.48	1779.5	513.0	10982.1	9.2	6.1	21.3	37.75	25.38	1.000	10.00	1.375	27.38
21X13X .875/1.500T	72.73	1643.0	537.9	9928.3	8.7	6.0	18.5	37.88	22.50	.875	13.00	1.500	21.44
24X10X1.000/1.500T	74.88	1811.0	541.4	11461.9	9.4	6.3	21.2	39.00	25.50	1.000	10.00	1.500	27.50
24X11X1.000/1.375T	75.13	1809.5	545.4	11474.9	9.4	6.3	21.0	39.13	25.38	1.000	11.00	1.375	27.38
21X14X .875/1.500T	75.61	1664.5	569.5	10395.4	8.9	6.2	18.3	39.38	22.58	.875	14.00	1.500	21.44
24X11X1.000/1.500T	77.76	1841.4	576.9	12073.8	9.5	6.6	28.9	40.50	25.50	1.000	11.00	1.500	27.50
21X15X .875/1.500T	78.49	1683.8	600.7	10047.4	9.0	6.4	18.1	40.88	22.58	.875	15.00	1.500	21.44
24X10X1.000/1.750T	79.68	1869.3	598.4	12578.9	9.7	6.7	21.0	41.50	25.75	1.000	10.00	1.750	27.75

2.0000 - 2 in.



# INITIAL DISTRIBUTION

Copies		Copies	
1	CNO/OP 098T	1	SUPSHIPS SAN DIEGO
1	NRL	1	SUPSHIPS SEATTLE
1	NAVMAT/03	13	NAVSEC
1	USNA	3	SEC 6105B/DIETRICH
1	NAVPGSCOL	1	SEC 6110
1	NAVWARCOL	1	SEC 6113
1	NROTC & NAVADMINU, MIT	1	SEC 6114/AVONNE
5	NAVSEA	1	SEC 6120/PALERMO
1	SEA 03	1	SEC 6128/O'BRIEN
1	SEA 03C	1	SEC 6128B/ARNTSON
1	SEA 035	1	SEC 6128C/DYE
1	SEA 03511	1	SEC 6128D/GALLAGHER
1	SEA 09632	1	SEC 6136
		1	SEC 6140
1	NOSC	12	DDC
1	NAVSHIPYD PUGET	3	HQS, USCG/HULL SCI BR
1	NAVSHIPYD CHASN	2	MARAD
1	NAVSHIPYD LBEACH	1	PRELIMINARY DESIGN
1	NAVSHIPYD MARE	1	R&D
1	Code 245L		
1	NAVSHIPYD NORVA		CENTER DISTRIBUTION
1	NAVSHIPYD PEARL	Copies	Code
3	NAVSHIPYD PHILA	1	012
1	Code 244/BARBARITO	1	11
1	Code 253/SILBERSTEIN	1	117
1	TECHNICAL LIB	4	1172 S. Hawkins
1	NAVSHIPYD PTSMH	1	16
1	SUPSHIPS BATH	2	163 Ford
2	SUPSHIPS BROOKLY	1	17
1	CHIEF DESIGN ENGR/	1	1702
	DELLATTO	1	172
1	SUPSHIPS GROTON	10	173
1	SUPSHIPS NEW ORLEANS		1 A.B. Stavovy
1	SUPSHIPS NEWPORT NEWS		1 R. Chiu
1	SUPSHIPS PASCAGOULA		1 J. Adamchak
1	SUPSHIPS QUINCY		1 A. Dinsenbacher
			1 W. Buckley
			2 S. Zemanek
			1 J. Beach
			2 N.S. Nappi

Copies	Code	
3	174	
1	18	
4	185	
2	28	
1	2814	J. Cavallero
1	2822	W. Lukens
30	5214.1	Reports Distribution
1	522.1	Library (C)
1	522.2	Library (A)